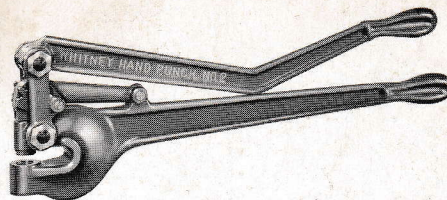
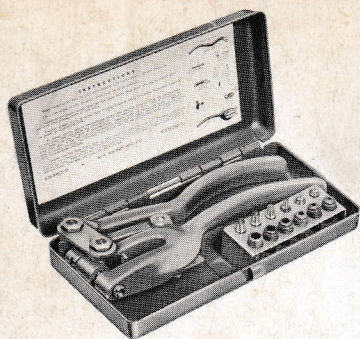


CATALOG
HT-66
JUNE 1, 1966

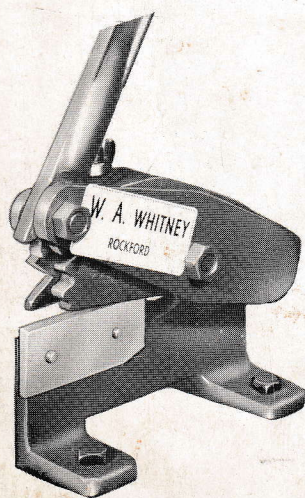
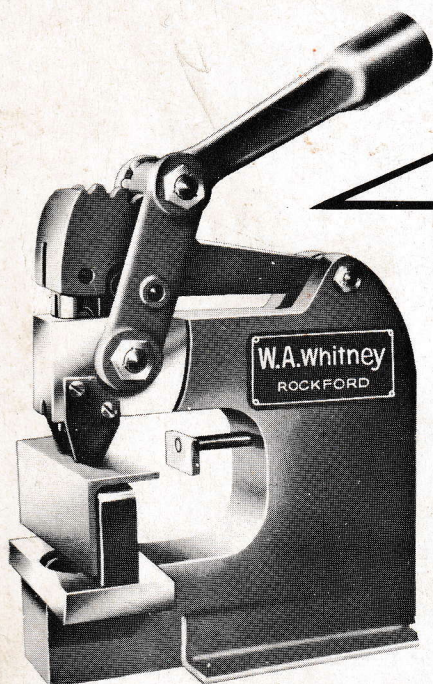


Hand Tools

WAW

DISTRIBUTED BY:

THE L. A. BENSON CO., INC.
3702 East Monument Street
Baltimore, Maryland 21205
(301) 542-9525



F A B R I C A T I N G S P E C I A L I S T S

W. A. WHITNEY MFG. CO.

Est.
1907

650 RACE ST.—ROCKFORD, ILL. 61105 AREA CODE 815
PHONE 964-6771

THE ORIGINAL
W.A. Whitney

Rockford, Illinois
Est. 1907



GENERAL INFORMATION

TERMS OF SALE

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

FREIGHT

F. O. B. our plant, Rockford, Ill.

CASH DISCOUNT

1% — 10 Days—Net 30 Days

MINIMUM ORDERS

\$5.00 per order

C. O. D. CHARGE

\$5.00 per order

CLAIMS FOR SHORTAGES

All claims for shortages must be made within 10 days of date of invoice

STOCK ITEMS

Normal delivery two weeks—
subject to prior sale

NON-STOCK ITEMS

Contact factory for delivery
information

STANDARD WARRANTY

1. W. A. Whitney Mfg. Company Hand Tools are guaranteed against defects in metal parts and workmanship.
2. If a metal part breaks because of a defect in the casting or because of poor workmanship, it will be replaced free of charge.
3. This guarantee does not cover perishable tooling. The length of life depends upon the amount of use and care given the equipment.
4. We assume no responsibility for damages from repair work done by other than authorized W. A. Whitney Mfg. Company's servicemen or from the use of other than genuine W. A. Whitney Mfg. Co. replacement parts or supplies.

RETURN GOODS POLICY

The following is the W. A. Whitney Mfg. Company's policy with respect to return goods other than those outlined in our standard warranty.

1. Re-Stocking charges on return goods with an invoice value less than \$50.00, will be \$5.00; over \$50.00—10% of invoice price.
2. No merchandise will be accepted for return without prior written authorization.
3. All returns are subject to our inspection upon receipt. Credit will not be allowed on damaged or used material.

All goods authorized for return are to be shipped prepaid to our plant. Collect shipments will be refused unless written authorization has been given prior to shipment. Items returned under warranty claim will be credited for transportation expense if due under warranty provision.

*For Catalogs
and Literature
Contact:*

For Delivery & Order Information Contact:

CUSTOMER SERVICE DEPARTMENT

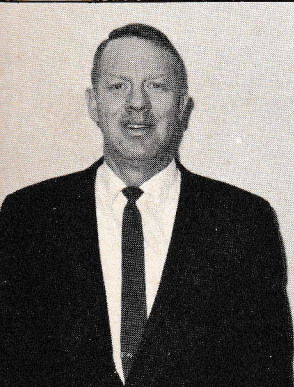
Wayne Reck,
Product Manager

Jim Noble,
Advertising Manager

Vern Jacobson,
Manager

Roger Larson,
Order Desk

Bob Sparkman,
Order Desk



W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant: Subject to change without notice.

INDEX

W. A. Whitney lever punches are the original "Whitney" punches which have been the favorite of good craftsmen since 1907. They provide powerful capacity, simple but rugged construction, and fine balance. The major parts of these tools are drop-forged of high-grade alloy steel. The wearing parts are carefully heat-treated. W. A. Whitney punches and dies are made of high-quality tool steel tempered and heat treated with modern equipment and techniques in our own plant.

All W. A. Whitney lever punches and shears are guaranteed for one (1) year from the purchase date against defects in metal parts and workmanship.

Inside front cover—General ordering information.

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Page 2	4B Hand Punch 45 Hand Punch
Page 3	4R Hand Punch w/Flange clearance 4D Indenting Punch
Page 4	8B Hand Punch
Page 5	8C Clip Punch 8D Indenting Punch
Page 6	#6 Hand Punch
Page 7	#6D Indenting Punch
Page 8	#2 Standard Hand Punch #2 Channel Iron Hand Punch
Page 9	#2 Close corner Hand Punch #2 Channel Iron Close Corner Hand Punch
Page 10	#1 Hand Punch
Page 11	Chicago Steel Slitting Shear
Page 12	#91 Series Bench Presses
Page 13	#91 Series Worktables, cabinets, die racks
Page 14	#91 Series Bench Presses, Tooling
Page 15	#91 Series Bench Presses, Tooling with worktable #91 Series Bench Presses, Tooling without worktable
Page 16	Punching and Punch and Die ordering information; Tonnage chart
Page 17	#91 Round Punches and Dies to 2"
Page 18	#91 Round Punches and Dies to 2"
Page 19	#91 Round Punches and Dies to 2"
Page 20	#91 Tooling for round punches and dies from 2-1/64 to 5"
Page 21	#91 round punches and dies from 2-1/64 to 5"
Page 22	#91 Oval punches and dies
Page 23	#91 Oval punches and dies
Page 24	#91 Rectangle punches and dies
Page 25	#91 Rectangle punches and dies
Page 26	#91 Square punches and dies
Page 27	#91 Special purpose punches and dies
Page 28	#91 Special purpose punches and dies
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Page 35	Repair parts prices
Page 36	Hammers

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Page 1

THE ORIGINAL
W.A. Whitney

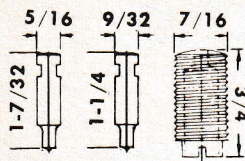
Rockford, Illinois
Est. 1907



No. 4B HAND PUNCH

1/4" Dia. Hole Thru 16 ga. Mild Steel

TOOLING



No. 4B Punch
No. 5 Punch
No. 4B Die
No. 5 Die
Note: No. 4B Die 18 Thread
No. 5 Die 20 Thread

STANDARD ROUND PUNCH & DIE SIZES

1/16"	3/16"
5/64"	13/64"
3/32"	7/32"
7/64"	15/64"
1/8"	1/4"
9/64"	17/64"
5/32"	9/32"
11/64"	

PRICES

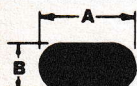
Punch \$2.40
Die \$2.40

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-L

PRICES

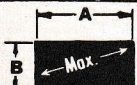
Punch \$2.40
Die \$2.40



OVAL

"A" Max. 9/32"
"B" Max. 1/4"

Punch \$5.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



RECTANGLE

Max. across corners
9/32"

Punch \$5.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



SQUARE

Min. 1/8" x 1/8"
(1/32" incr.)

Max. 3/16" x 3/16"

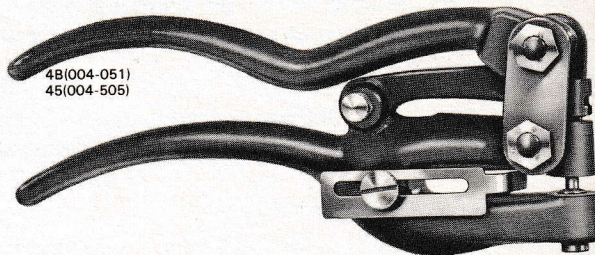
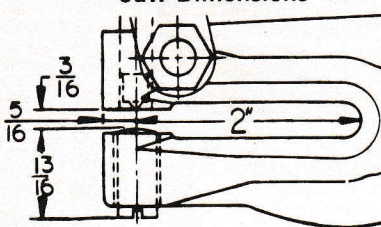
Punch \$5.00—Die \$5.00

**special shapes
available**

NOTE

No. 45 Punch is identical to 4B Punch except lower jaw is bored for NO. 5 Punches and Dies

Jaw Dimensions



4B(004-051)
45(004-505)

\$11.00

**4B or 45 Hand Punches with
1/4" punch and die (no substitutions)**

SPECIFICATIONS

4B and 45 HAND PUNCHES

Capacity 1.2 ton
Max. Dia. 9/32" (thru
18 ga. mild steel)
Max. Thickness 14 ga.
mild steel (3/16 dia. hole)
Throat Depth 2"
Space Between Punch & Die . 3/16"
Overall Length 8-1/2"
Weight (tool only) 2-1/2 lbs.

- Powerful-Lightweight-Compact
- All major parts drop-forged
- Wearing parts heat-treated
- Side gage permits throat depth adjustment
- Die adjusting key provided with each tool



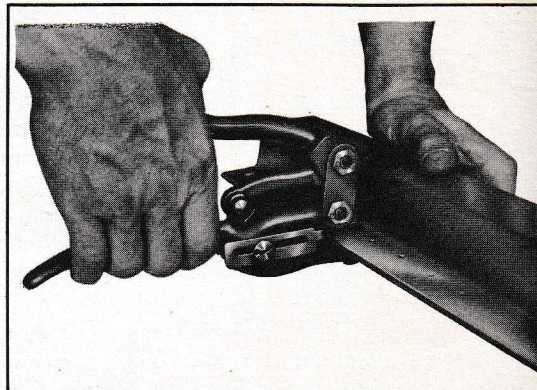
**No. 4B or 45
PUNCH SET
\$14.00**

4B(004-025)
45(004-500)

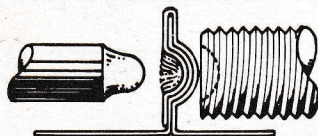
contains
**4B or 45 Tool
7 Punches
7 Dies**

(specify which tool on order)

Heavy gage enameled steel box with hinged cover holds Punch firmly in place. Metal Rack holds six extra punches and dies. Weight 4-1/2 lbs. Kit includes 4B Punch or 45 Punch (specify which tool on order) metal box and seven punches and dies in the following sizes: 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", and 9/32".



BUTTON PUNCHES & DIES

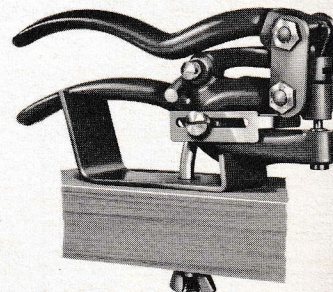


Button punches and dies are used to fasten three or more thicknesses of metal together without punching a hole or using a rivet. Capacity 3 thicknesses of 22 ga. mild steel. Price per set **\$3.00**

No. 4V VISE

(004-044)

This sturdy, inexpensive vise converts 4B, 45 and 4D punches to convenient, easy to operate bench-type tool. Simply drill one hole in the bench and fasten, securely by wing nut. Price **\$2.50**



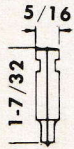
W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant: Subject to change without notice.

No. 4R HAND PUNCH

1/4" Dia. Hole Thru 16 ga. Mild Steel

TOOLING



No. 4B
Punch



No. 4B
Die

STANDARD ROUND PUNCH & DIE SIZES

1/16"	3/16"
5/64"	13/64"
3/32"	7/32"
7/64"	15/64"
1/8"	1/4"
9/64"	17/64"
5/32"	9/32"
11/64"	

PRICES

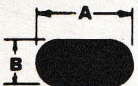
Punch	\$.50
Die	\$.50

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-L

PRICES

Punch	\$2.40
Die	\$2.40



OVAL

"A" Max. 9/32"
"B" Max. 1/4"

Punch \$5.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



RECTANGLE

Max. across corners
9/32"

Punch \$5.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



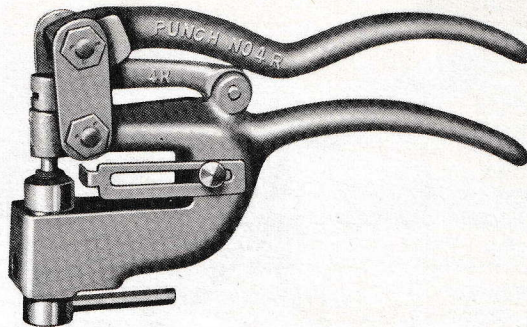
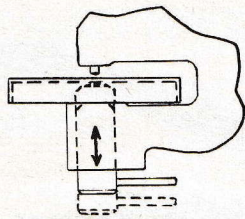
SQUARE

Min. 1/8" x 1/8"
(1/32" incr.)

Max. 3/16" x 3/16"

Punch \$5.00—Die \$5.00

*special shapes
available*



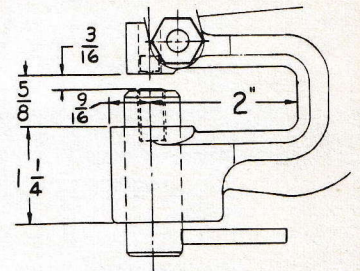
(004-052)

\$45.00

4R Hand Punch with

1/4" Punch and Die (no substitutions)

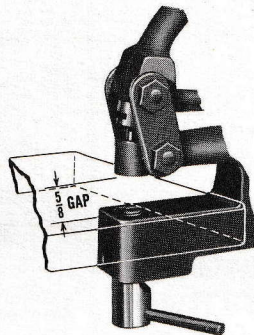
This Punch is basically the same as No. 4B except for a lever mechanism to drop the die down to clear a 1/2" flange. A quarter turn adjusts the die position.



SPECIFICATIONS

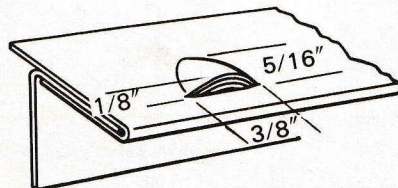
4R HAND PUNCH

Capacity	1.2 ton
Max. Dia.	9/32" (thru 18 ga. mild steel)
Max. Thickness	14 ga. mild steel (3/16 dia. hole)
Throat Depth	2"
Space Between Punch & Die ..	3/16"
Overall Length	8-1/2"
Weight	3 lbs.



No. 4D INDENTING HAND PUNCH

Capacity 3 Thicknesses of 26 ga. Mild Steel



SPECIFICATIONS

4D HAND PUNCH

Capacity	3 thicknesses of 26 ga. mild steel
Indent Size	1/8" x 5/16" x 3/8"
Throat Depth	2"
Overall Length	8 1/2"
Weight	2 1/2 lbs.



(004-045)

\$27.00

*4D Indenting Punch with
Indenting Punch and Die*

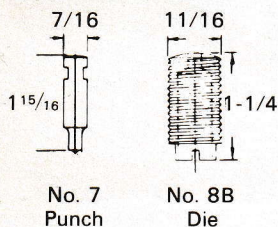
No. 4D punch is drop-forged with all main parts heat-treated. The tight secure indenting work is illustrated above. Adjustable side gage permits setting of throat depth to any desired point.

Punch \$2.80 Die \$4.25 Price Per Set \$7.05
No. 4V vise can be used to hold this punch.

NO. 8B HAND PUNCH

7/16" Dia. Hole Thru 16 ga. Mild Steel

TOOLING



STANDARD ROUND PUNCH & DIE SIZES

1/16"	3/16"	5/16"
5/64"	13/64"	21/64"
3/32"	7/32"	11/32"
7/64"	15/64"	23/64"
1/8"	1/4"	3/8"
9/64"	17/64"	25/64"
5/32"	9/32"	13/32"
11/64"	19/64"	27/64"
		7/16"

PRICES

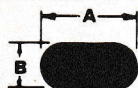
Punch	\$0.75
Die	\$0.75

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-Z

PRICES

Punch	\$3.00
Die	\$2.90

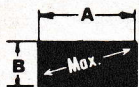


OVAL

"A" Max. 7/16"

"B" Max. 13/32"

Punch \$7.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



RECTANGLE

Max. across corners
7/16"

Punch \$6.00—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



SQUARE

Min. 1/8" x 1/8"
(1/32" incr.)

Max. 5/16" X 5/16"
Punch \$5.00—Die \$5.00

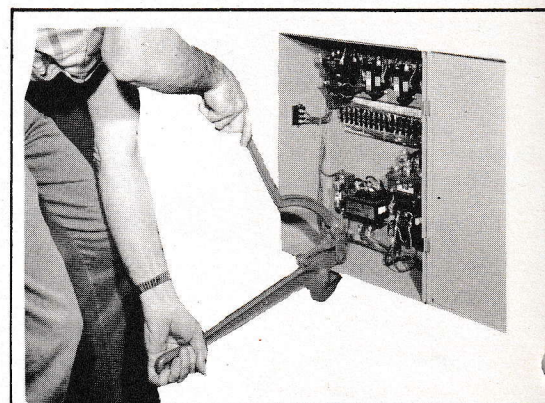
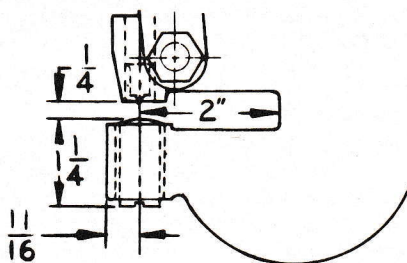
*special shapes
available*



(008-026)

\$29.00

**No. 8B Hand Punch with
1/4" Punch and Die (no substitutions)**



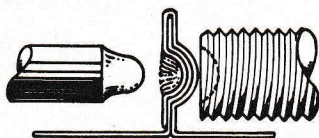
The No. 8B Punch is a sturdily built drop-forged tool for on-the-job and in-the-shop sheet metal work. It is equipped with side gage throat depth adjustment and die adjusting key. Tool is light weight, compact and designed to operate at maximum capacity without undue strain on the operator. Wide range of punches and dies makes hole punching easy, convenient and fast. Long a favorite of overhead door installers.

SPECIFICATIONS

No. 8B HAND PUNCH

Capacity	2.4 ton
Max. Dia.	7/16" (thru 16 ga.) mild steel)
Max. Thickness	1/8" mild steel (1/4" dia. hole)
Throat Depth	2"
Space between Punch & Die	1/4"
Overall Length	18-1/2"
Weight	7-1/2 lbs.

BUTTON PUNCHES & DIES

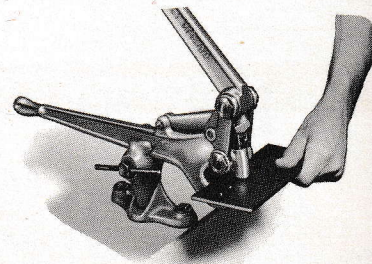


Button punches and dies are used to fasten three or more thicknesses of metal together without punching a hole or using a rivet. Capacity 3 thicknesses of 16 ga. mild steel. Price per set **\$3.10**

No. 2V VISE

(002-027)

Sturdy malleable iron vise bolts to bench or plank to hold No. 8B Punch rigidly for use as a bench press, giving the operator a free hand to hold and locate the work-piece. Price **\$7.50**



W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant: Subject to change without notice.

NO. 8C CLIP PUNCH

Capacity Three Thicknesses of 20 ga. Mild Steel

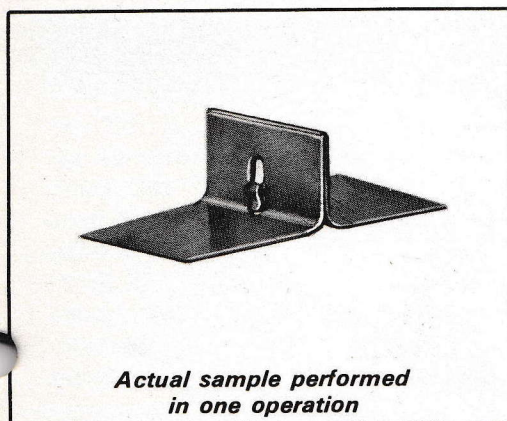
**For LOCKING SHEET METAL
Punches & Clips
in One Double-Action
Operation**



(008-023)

\$56.00

**8C Clip Punch with
Punch, Die and Plunger**



*Actual sample performed
in one operation*

No. 8C Clip Punch is specially designed for securely fastening seams in duct and sheet metal work. One operation is required for the complete lock-no hammering down is necessary. An adjustable side gage permits setting of throat depth to exact requirements for accurate, repetitive work. This tool replaces rivet or sheet metal screw method to fasten two or three pieces of sheet metal.

SPECIFICATIONS

NO. 8C CLIP PUNCH

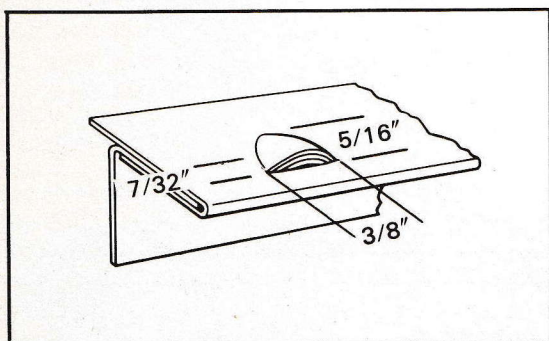
Capacity 3 thicknesses of
20 ga. mild steel
Length 18-1/2"
Throat Depth 2"
Weight 8 lbs.

REPLACEMENT 8C PUNCH, DIE AND PLUNGER PRICES

Punch \$5.40 Die \$4.80 Plunger \$4.85
Price For Complete Replacement Set \$15.05

NO. 8D INDENTING PUNCH

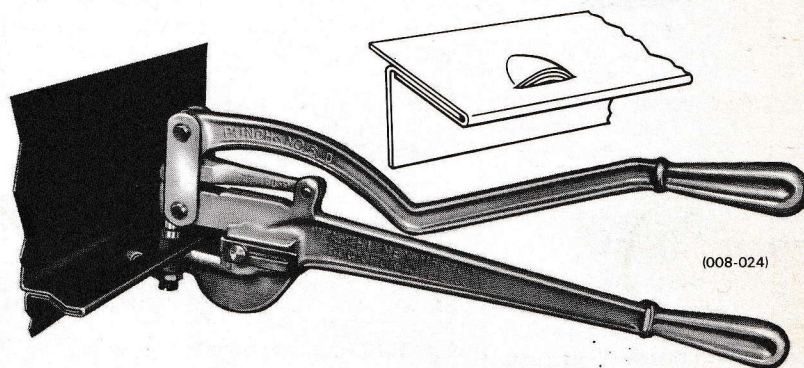
Capacity 3 thicknesses of 20 ga. Mild Steel



SPECIFICATIONS

8D PUNCH

Capacity . . . 3 thicknesses of 20 ga.
Mild Steel
Indent Size . . 7/32" x 3/8" x 5/16"
Overall Length 18-1/2"
Throat Depth 2"
Weight 7-1/2 lbs.



(008-024)

\$35.00

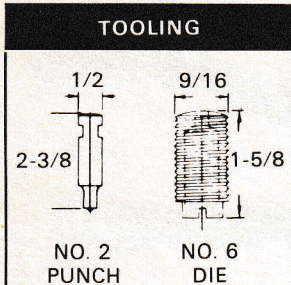
**8D Indenting Punch with
Indenting Punch and Die Set**

No. 8D punch is drop-forged with all main parts heat-treated. The tight secure indenting work is dimensioned and illustrated above on the left. Adjustable side gage permits setting of throat depth to any desired point.

REPLACEMENT 8D PUNCH & DIE PRICES
Punch \$5.00 Die \$6.00 Price Per Set \$11.00

NO. 6 HAND PUNCH

1/4" Dia. Hole Thru 1/8" ga. Mild Steel



STANDARD ROUND PUNCH & DIE SIZES

1/16"	7/32"
5/64"	15/64"
3/32"	1/4"
7/64"	17/64"
1/8"	9/32"
9/64"	19/64"
5/32"	5/16"
11/64"	21/64"
3/16"	11/32"
13/64"	

PRICES

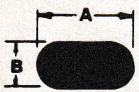
Punch	\$1.00
Die	\$1.00

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-S

PRICES

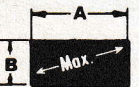
Punch	\$2.00
Die	\$2.90



OVAL

"A" Max. 11/32"
"B" Max. 5/16"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32"
to 3/32" double price)



RECTANGLE

Max. across corners
11/32"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32"
to 3/32" double price)



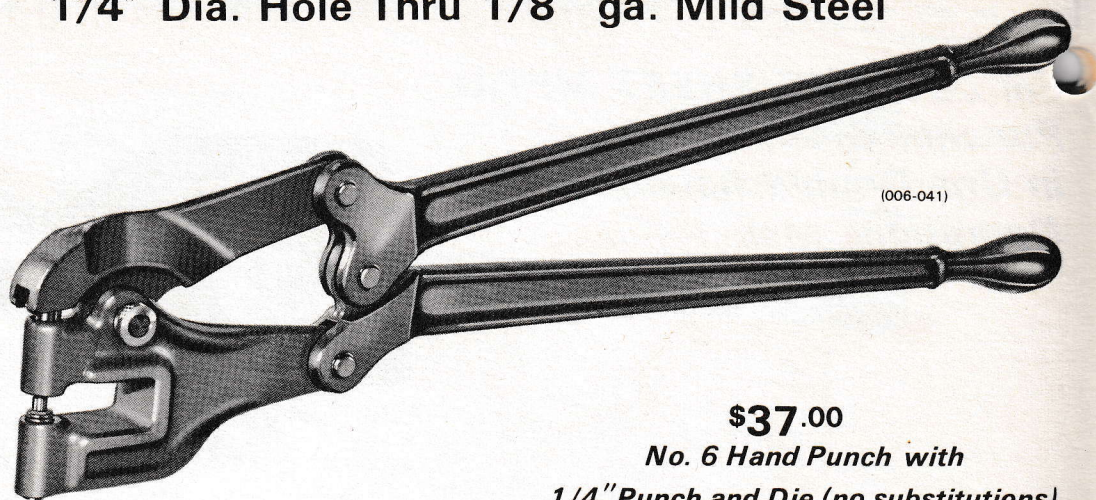
SQUARE

Min. 1/8" x 1/8"
(1/16" incre.)

Max. 1/4" x 1/4"

Punch \$5.00—Die \$5.00

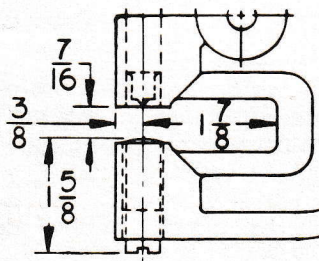
*special shapes
available
add 25% for
non-stock items*



\$37.00

*No. 6 Hand Punch with
1/4" Punch and Die (no substitutions)*

JAW DIMENSIONS



The No. 6 punch is especially adapted to skylight, ventilating and tank flange work. It punches within 3/8" of an inside corner of angle iron. The jaw will reach into a space 5-1/4" wide, and punch will strip where handle cannot be opened to 90°.

This tool is especially adapted for button punching work.

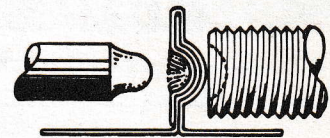
The No. 6 punch is supplied with die adjusting key.

SPECIFICATIONS

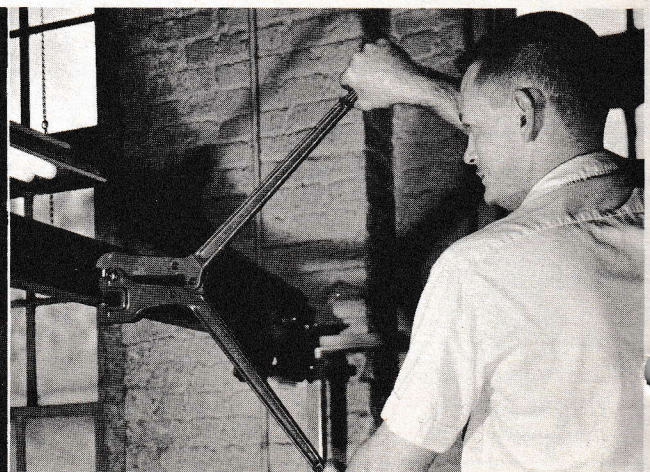
NO. 6 HAND PUNCH

Capacity	2.7 ton
Max. Dia.	11/32" (thru 12 ga. mild steel)
Max. Thickness	1/8" mild steel (1/4" dia. hole)
Throat Depth	1-7/8"
Space Between Punch & Die	3/8"
Overall Length	26-1/2"
Weight	10-1/2 lbs.

BUTTON PUNCHES & DIES



Button punches and dies are used to fasten three or more thicknesses of metal together without punching a hole or using a rivet. Capacity 3 thicknesses of 14 ga. mild steel. Price per set **\$3.20**



W. A. WHITNEY MFG. CO.

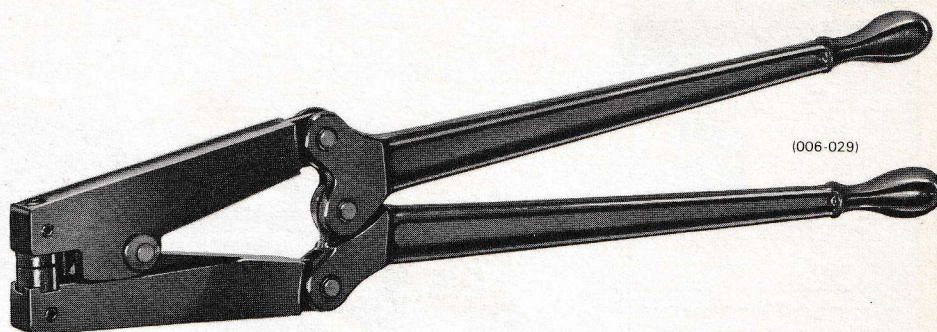
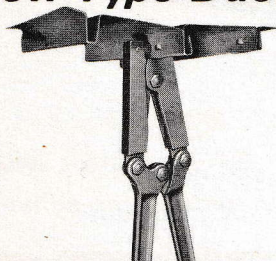
All Prices F.O.B. Rockford Plant: Subject to change without notice.

THE ORIGINAL
W.A. Whitney
Rockford, Illinois
Est. 1907

6D INDENTING HAND PUNCH

Capacity—3 Thicknesses of 20 ga. Mild Steel

**Special Design
for Joining Roof
Sections and Making
Snap-Lock Male Pieces
for New Type Ducts**



(006-029)

\$79.00

**6D Indenting Hand Punch with
Punch and Die**

FASTENING WITHOUT FASTENERS

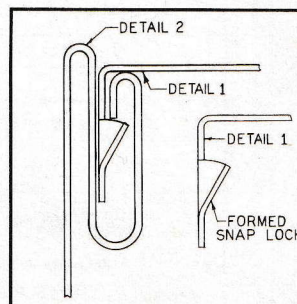
The No. 6D Indenting Punch has become a popular tool in joining roof deck sections together, eliminating the need of regular fasteners. It will fasten three thicknesses of 20 ga. metal together by indenting and obtaining a thumb-nail design as shown below. When subjected to a tensile test this thumb-nail indentation design has an ultimate tensile strength of 3000 lbs. per joint. The tool is designed for wide jaw openings to fit in narrow, confined space. The No. 6D can also be used as a Button Punch as illustrated in making the snap lock male piece for new type ducts. It forms the lugs or ears that lock firmly on the seamed edge of a joining piece.

SPECIFICATIONS

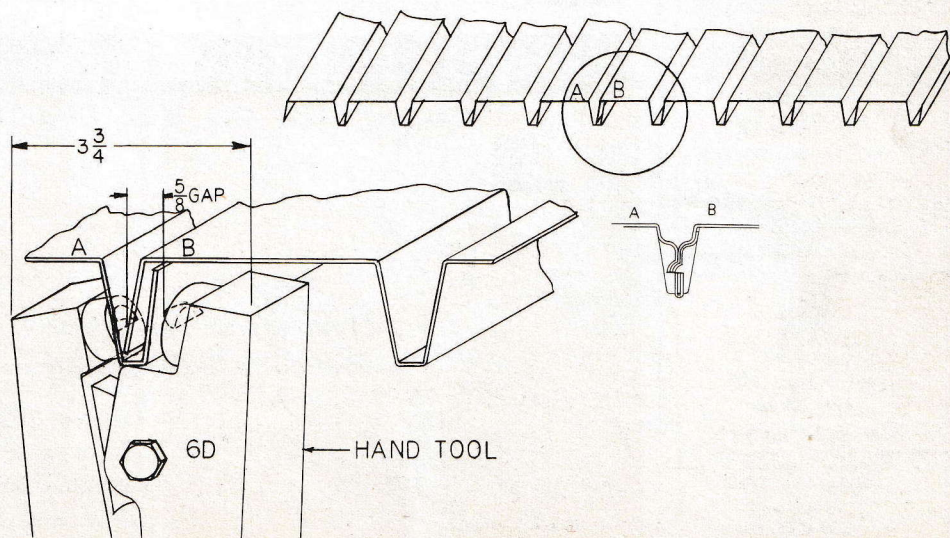
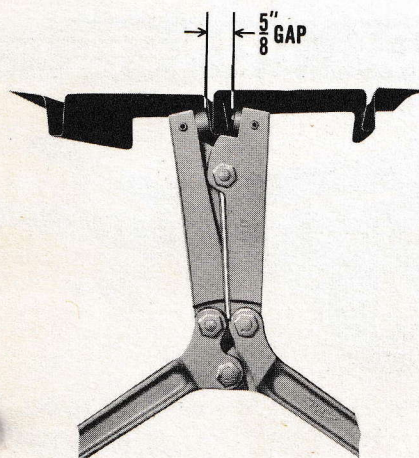
No. 6D HAND PUNCH

Capacity . . . 3 thicknesses of 20 ga.
mild steel
Indent Size . . . 1/4" X 9/16" wide
Throat Depth . . . 5/8"
Length . . . 27"
Weight . . . 12 lbs.

REPLACEMENT 6D PUNCH & DIE SET PRICES
Punch \$1.75 Die \$1.85 Price Per Set \$3.60



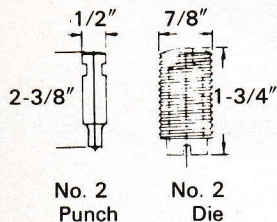
The No. 6D Hand Tool can be used as a button punch for making the snap lock for the male piece of the new Sheet Metal & Air Conditioning Contractors National Association's new standard ducts.



No. 2 STANDARD PUNCH

1/4" Dia. Hole Thru 1/4" Mild Steel

TOOLING



STANDARD ROUND PUNCH & DIE SIZES

1/16"	7/32"	3/8"
5/64"	15/64"	25/64"
3/32"	1/4"	13/32"
7/64"	17/64"	27/64"
1/8"	9/32"	7/16"
9/64"	19/64"	29/64"
5/32"	5/16"	15/32"
11/64"	21/64"	31/64"
3/16"	11/32"	1/2"
13/64"	23/64"	

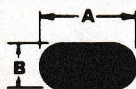
PRICES
Punch.....\$1.00
Die..... 1.00

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-Z

PRICES

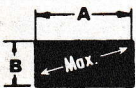
Punch.....\$2.00
Die.....\$3.00



OVAL

"A" max. 1/2"
"B" Max. 15/32"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)



RECTANGLE

Max. across corners
1/2"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32" to 3/32" double price)

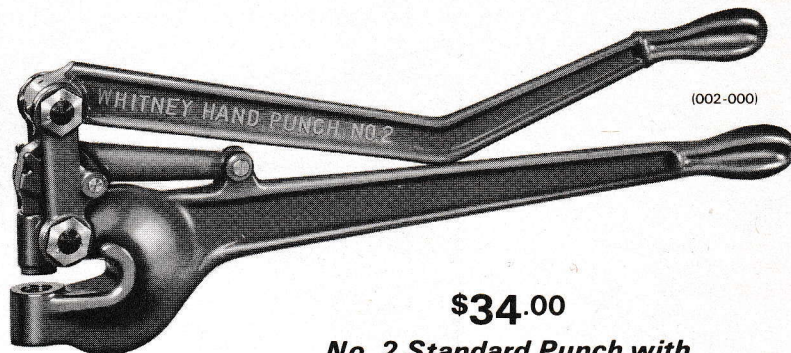


SQUARE

Min. 1/8" x 1/8"
(1/16" incre.)

Max. 5/16" x 5/16"
Punch \$5.00—Die \$5.00

special shapes
available
add 25% for
non-stock items



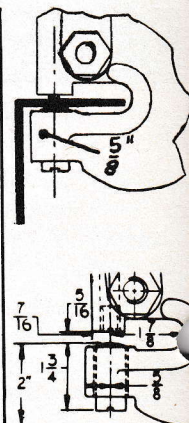
\$34.00

**No. 2 Standard Punch with
1/4" Punch and Die (no substitutions)**

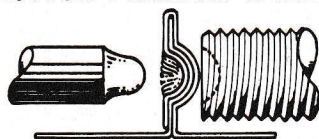
- Most powerful punch of its size due to unique cam action
- Lightweight for overhead work
- All major parts drop-forged
- Wearing parts heat-treated
- Designed for years of trouble-free service

No. 2 STANDARD PUNCH SPECIFICATIONS

Capacity5 ton
Max. Dia.1/2" (thru 10 ga mild steel)
Max. Thickness1/4" mild steel (9/32 dia. hole)
Throat Depth1-7/8"
Space between Punch & Die ..5/16"
Overall Length23"
Weight14 lbs.



BUTTON PUNCHES & DIES



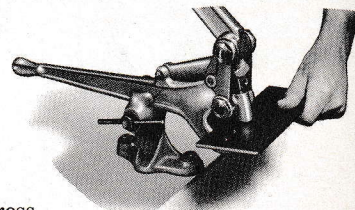
Capacity 3 thicknesses of 14 ga. mild steel
Price per set **\$3.20**

NO. 2V VISE

(002-027)

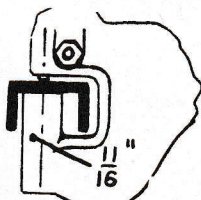
Price \$7.50

No. 2V Vise converts No. 2 series punch into handy lever operated bench press



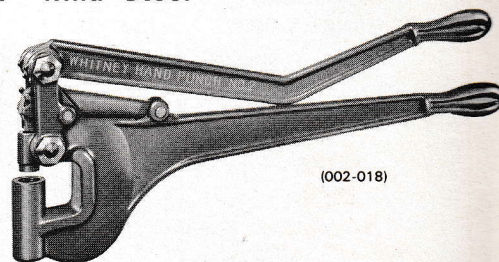
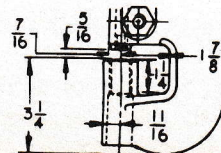
NO. 2 CHANNEL IRON PUNCH

1/4" Dia. Hole Thru 1/4" Mild Steel



\$42.00

**No. 2 Channel Iron Punch with
1/4" Punch and Die (no substitutions)**

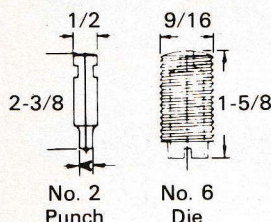


The No. 2 Channel Iron Punch is identical to No. 2 Standard Punch except for jaws. It is specially designed for punching the web in channel iron. All parts and tooling are interchangeable. Wt 17 lbs.

No. 2 CLOSE CORNER PUNCH

1/4" Dia. Hole Thru 1/4" Mild Steel

TOOLING



STANDARD ROUND PUNCH & DIE SIZES

1/16"	7/32"
5/64"	15/64"
3/32"	1/4"
7/64"	17/64"
1/8"	9/32"
9/64"	19/64"
5/32"	5/16"
11/64"	21/64"
3/16"	11/32"
13/64"	

PRICES

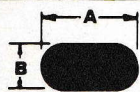
Punch	\$1.00
Die	\$1.00

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-S

PRICES

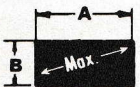
Punch	\$2.00
Die	\$2.90



OVAL

"A" Max. 11/32"
"B" Max. 5/16"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32"
to 3/32" double price)



RECTANGLE

Max. across corners
11/32"

Punch \$9.50—Die \$5.00
(Except when "B" is 1/32"
to 3/32" double price)



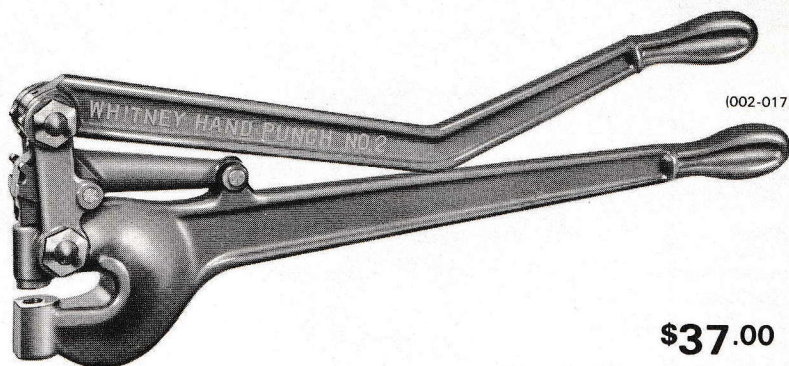
SQUARE

Min. 1/8" x 1/8"
(1/16" incre.)

Max. 1/4" x 1/4"

Punch \$5.00—Die \$5.00

*special shapes
available
add 25% for
non-stock items*



(002-017)

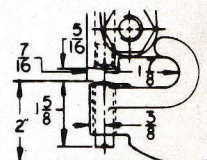
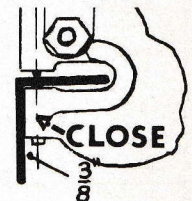
\$37.00

*No. 2 Close Corner Punch with
1/4" Punch and Die (no substitutions)*

SPECIFICATIONS

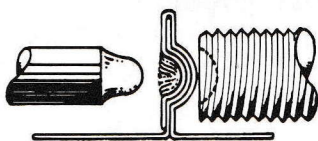
No. 2 CLOSE CORNER PUNCH

Capacity	5 ton
Max. Dia.	11/32" (thru 3/16" mild steel)
Max. Thickness	1/4" mild steel (9/32 dia. hole)
Throat Depth	1-7/8"
Space between Punch & Die	5/16"
Overall Length	23"
Weight	14 lbs.



The Close Corner Hand Punch is identical to No. 2 Standard Punch except the face of the punch is milled off to permit punching holes within 3/8" of a corner. Die range is limited to 11/32" dia.

BUTTON PUNCHES and DIES



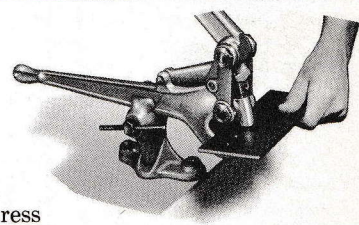
Capacity 3 thicknesses of 14 ga. mild steel
Price per set **\$3.20**

NO. 2V VISE

(002-027)

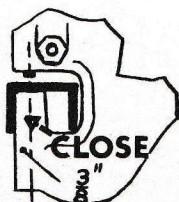
Price **\$7.50**

No. 2V Vise converts No. 2 series punch into handy lever operated bench press



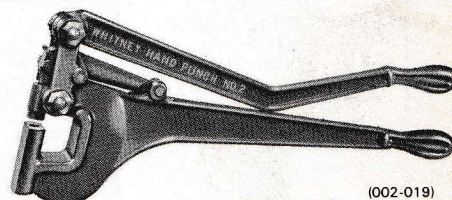
No. 2 CLOSE CORNER CHANNEL IRON PUNCH

1/4" Dia. Hole Thru 1/4" Mild Steel



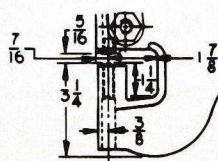
\$47.00

*No. 2 Close Corner Channel Iron Punch with
1/4" Punch and Die (no substitutions)*



(002-019)

This punch is identical to No. 2 Channel Iron Hand Punch except the face of this punch is milled off to permit punching holes within 3/8" of a corner of the web in channel iron. Dies are limited to 11/32" dia. Weight 17 lbs.



THE ORIGINAL

W.A. Whitney

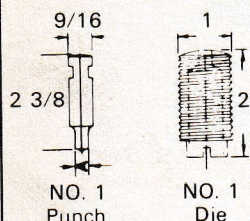
Rockford, Illinois
Est. 1907



NO. 1 HAND PUNCH

1/2" Dia. Hole Thru 3/16" Mild Steel

TOOLING



STANDARD ROUND PUNCH & DIE SIZES

1/16"	15/64"	13/32"
5/64"	1/4"	27/64"
3/32"	17/64"	7/16"
7/64"	9/32"	29/64"
1/8"	19/64"	15/32"
9/64"	5/16"	31/64"
5/32"	21/64"	1/2"
11/64"	11/32"	33/64"
3/16"	23/64"	17/32"
13/64"	3/8"	35/64"
7/32"	25/64"	9/16"

PRICES

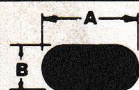
Punch	\$1.25
Die	\$1.25

DECIMAL ROUND PUNCH AND DIE SIZES

Drill size 1-52
Letter size A-Z

PRICES

Punch	\$3.25
Die	\$3.25



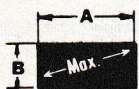
OVAL

"A" Max. 9/16"

"B" Max. 17/32"

Punch \$7.50—Die \$7.50

(Except when "B" is 1/32" to 3/32" double price)



RECTANGLE

Max. across corners
9/16"

Punch \$7.50—Die \$7.50

(Except when "B" is 1/32" to 3/32" double price)



SQUARE

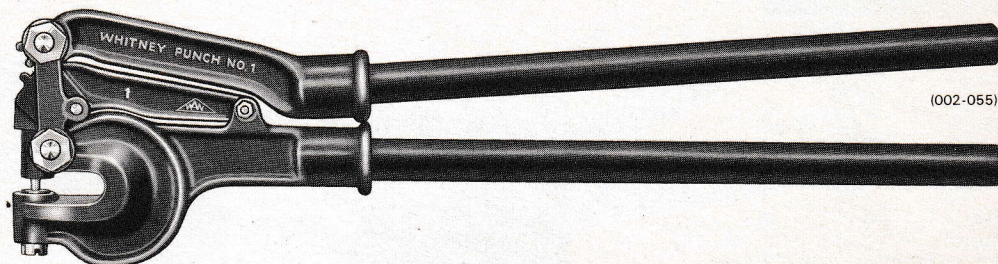
Min. 1/8" x 1/8"

(1/16" incre.)

Max. 3/8" x 3/8"

Punch \$6.00—Die \$6.00

**special shapes
available
add 25% for
non-stock items**



(002-055)

\$45.00

**No. 1 Hand Punch with
1/4" Punch and Die (no substitutions)**

SPECIFICATIONS

NO. 1 HAND PUNCH

Capacity.....7.5 ton

Max. Dia.....9/16" (thru 10 ga.
mild steel)

Max. Thickness.....1/4" mild steel
(3/8" dia. hole)

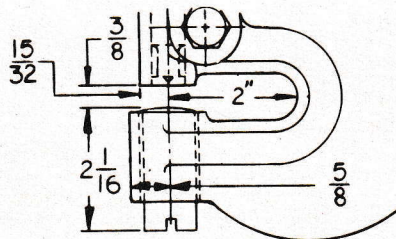
Throat Depth.....2"

Space Between Punch & Die. . .3/8"

Overall Length.....34"
(includes 24" removable
pipe handles)

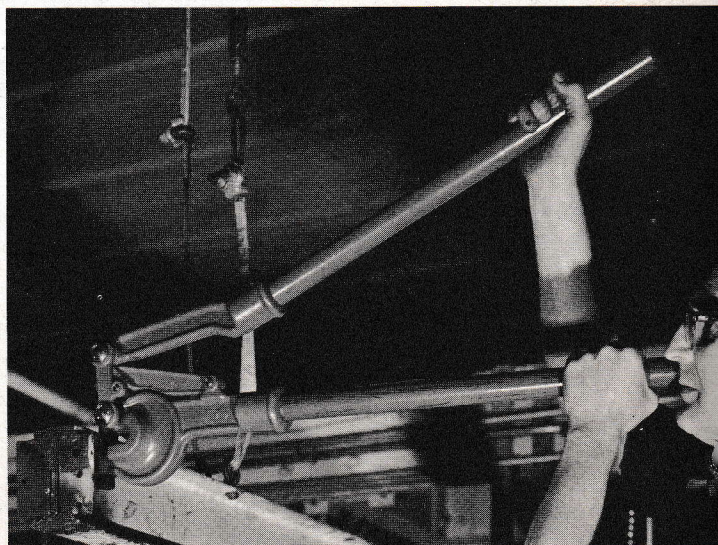
Weight (including handles) . . 23 lbs.

JAW DIMENSIONS



The No. 1 Hand Punch is the most powerful portable lever-operated tool in the W. A. Whitney line. This punch features gear and cam design for ease of punching holes as large as 9/16" diameter. Insertable pipe handles are

used so the tool may be dismantled for storing or carrying in the toolbox. All main parts are drop-forged steel with wearing parts heat treated. The No. 1 punch is supplied with an adjusting key.



W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant; Subject to change without notice.

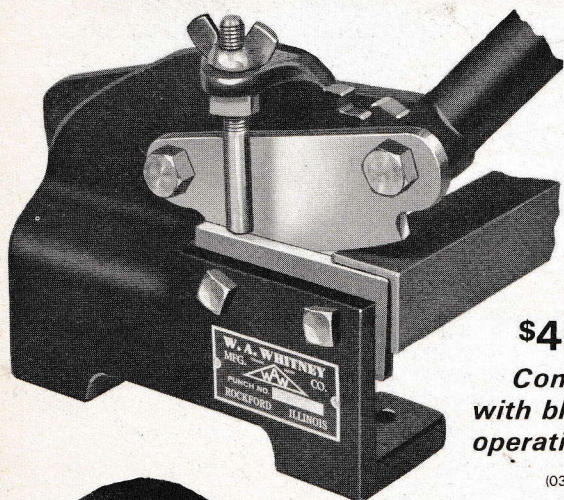


CHICAGO SLITTING SHEAR

Capacity—1/8" Thick Mild Steel

**THROATLESS
DESIGN**

**UNLIMITED
SHEET SIZE**



\$49.00

*Complete
with blades and
operating handle*

(030-000)

The "THROATLESS" design of this shear allows for cutting large sheets without frame interference. This shear is also capable of shearing steel bars, banding, angle iron, electric cable, and wire, plus other nonmetallic material.

The main frame is a solid one piece casting with offset for clearance in cutting long sheets. Blades are made of high grade tool steel, and are easily put in place. An adjustable hold down is provided.

For easier "on the job" work, the Chicago Shear may be mounted to a plate or board, and secured to a truck bed, or field work bench. Cut curves or straight parts with ease. (see below)

SPECIFICATIONS

CHICAGO CUTTING SHEAR

Capacity.....	1/8" mild steel
Blade Length	3-1/2"
Overall Length	11"
Weight	18 lbs.

REPLACEMENT PRICE UPPER BLADE \$9.00

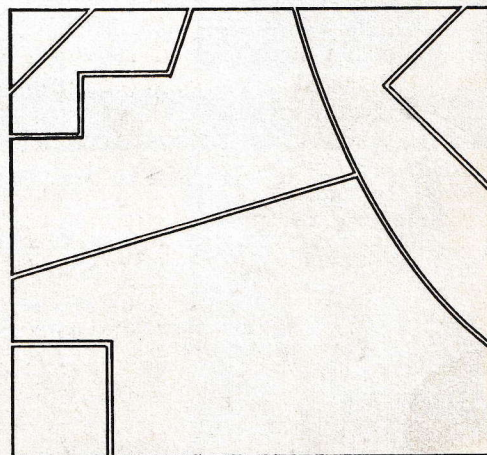
REPLACEMENT PRICE LOWER BLADE \$8.65

REPLACEMENT PRICE BLADE SET \$17.65

This shear used in conjunction with No. 2 Series Punches makes an ideal kit for the installation of overhead doors.



SIZE
UNLIMITED



**EXAMPLES OF
VARIOUS TYPES OF CUTS**

650 Race St. Rockford, Ill. 61105 Area Code 815 Ph. 964-6772

All Prices F.O.B. Rockford Plant: Subject to change without notice.

THE ORIGINAL
W.A. Whitney

Rockford, Illinois
Est. 1907



No. 91 BENCH PRESS

2" Dia. Hole Thru .12 ga. Mild Steel

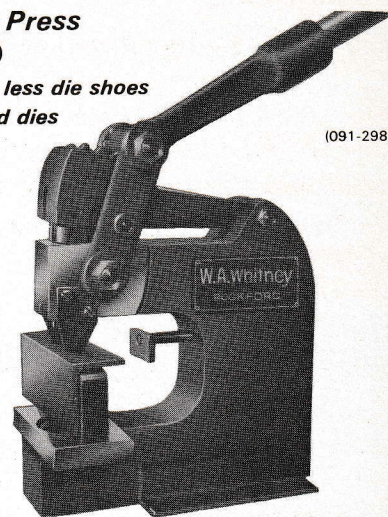
A FABRICATING SHOP IN ITSELF

- Hefty 10 ton capacity
- Standard & Special Tooling for wide work application
- Lever operated
- Rugged drop-forged construction
- All wearing parts heat-treated

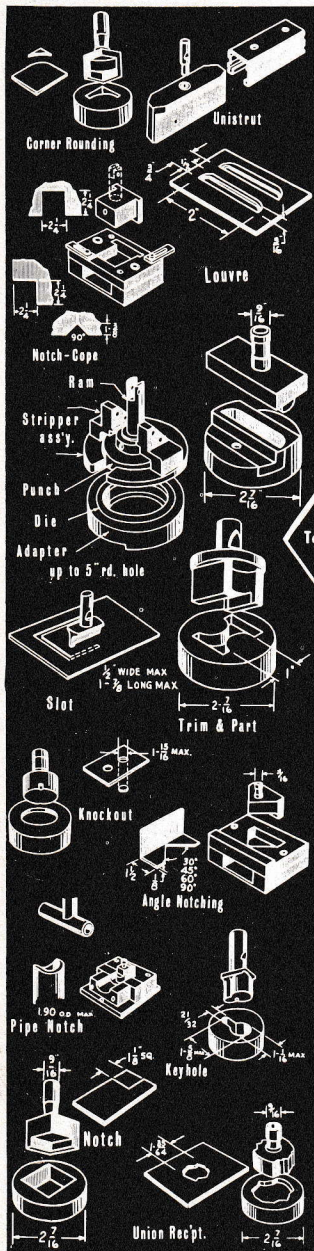
No. 91 Bench Press

\$145.00

one set narrow strippers less die shoes
and punches and dies



(091-298)

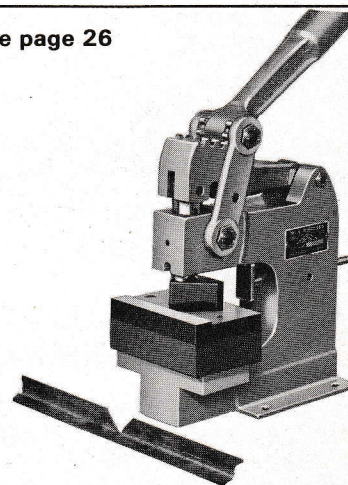


SPECIFICATIONS

Capacity 10 ton
Max. Dia. 5" (thru 20 ga. mild steel)
2" round hole thru 12 ga. mild steel
1-3/4" thru 1/8" mild steel
3/4" thru 3/16" mild steel
1/2" thru 1/4" mild steel
Channel 2-1/2" flange x 1/4" web
Angle iron 2-1/2" x 2-1/2" x 1/4"
Max. Thickness 1/4" mild steel
(1/2" dia. hole)
Channel Iron Cap 2-1/2" flange x
1/4" web
Angle Iron Cap 2-1/2" x 2-1/2" x
1/4"
Throat Depth (adjustable backgage)
..... 5"
Shut Height 3-1/8"
Overall Length 11-1/2"
Weight 79 lbs.

See Pages 14-15 for tooling with and without worktable.
See pages 17-21 for rounds to 5".
See pages 22-26 for ovals, rectangles squares.
See pages 27-31 for special shapes.

See page 26



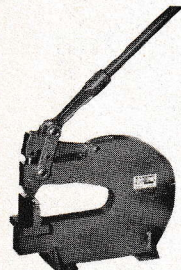
ALL WORKING PARTS ON NO. 91, 92, 93, 94 PRESSES ARE INTERCHANGEABLE.

No. 92-93-94 BENCH PRESS

Identical to No. 91 except for Weight and 11-1/2" Depth of Throat

No. 92 Bench Press
\$225.00

with one set narrow strippers less
die shoes and punches and dies

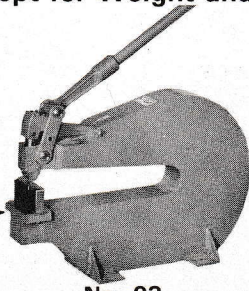


No. 92
Throat Depth 10"
Weight 155 lbs.

(092-003)

No. 93 Bench Press
\$325.00

with one set narrow strippers less
die shoes and punches and dies

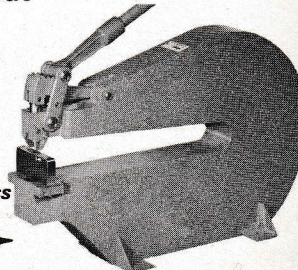


No. 93
Throat Depth 18"
Weight 435 lbs.

(093-004)

No. 94 Bench Press
\$450.00

with one set narrow strippers less
die shoes and punches and dies



No. 94
Throat Depth 24"
Weight 655 lbs.

(094-004)

W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant. Subject to change without notice.

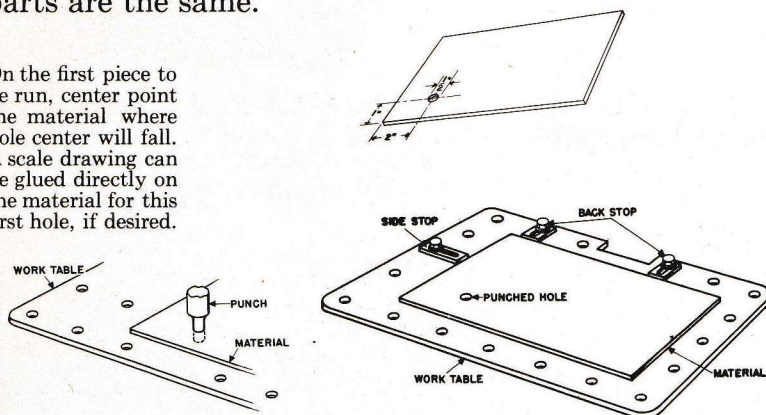
No. 91 SERIES WORKTABLE

For Short Run Low Cost Stampings

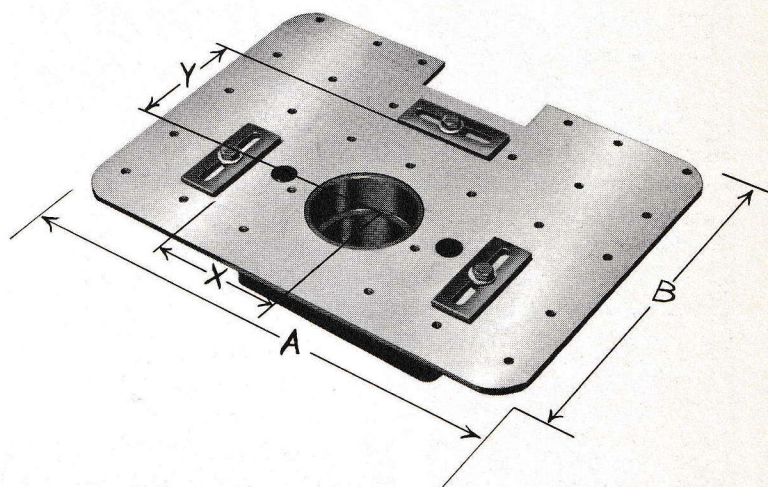
See pages 14-15 for tooling with and without worktable.

This popular worktable assembly is available for all 91 series presses and mounts in same manner as a regular die shoe. Top of the work table has tapped holes for the (3) adjustable gages (shown below). First work piece is layed out and gage set to form "nest" for duplicate work pieces to be punched. This new method eliminates hours of layout time and assures that all duplicate parts are the same.

On the first piece to be run, center point the material where hole center will fall. A scale drawing can be glued directly on the material for this first hole, if desired.



Lay the workpiece on the worktable and bring the punch center point to the center point marked on the sheet. When aligned, punch this hole and leave punch in hole. Line up worktable gauges at points marked. Run entire lot of material requiring this hole. Using the same procedure punch the next hole and re-align gauges.



Press No.	Work table assembly No.	"X" Max.	"Y" Max.	"A"	"B"	Work table price*
91	091-301	5"	5"	12"	9"	\$45.00
92	092-004	7"	10"	16"	14"	\$52.00
93	093-005	9"	18"	20"	22"	\$55.00
94	094-005	11"	24"	24"	28"	\$65.00

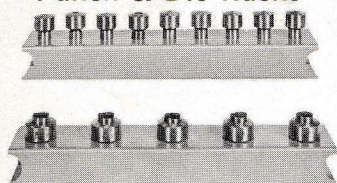
*Work Table Assembly includes table, die shoe and (3) adjustable stops.

CABINETS FOR No. 91-92 BENCH PRESSES

The heavy gage welded steel cabinet provides ideal mounting for No. 91 and 92 presses. Slanted shelves at rear provide convenient storage for extra

punches, dies and die shoes. A chute guides slugs to bottom of cabinet where container may be placed. Cabinet is designed for four-point bolting to floor.

Punch & Die Racks

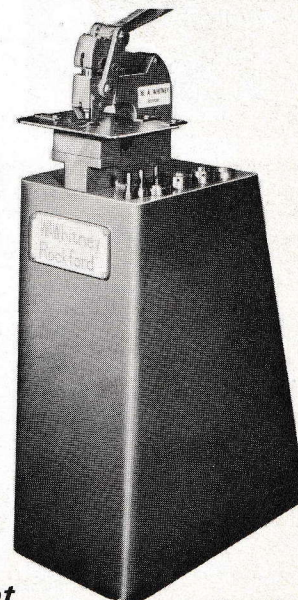


No. 91-92 Die Rack
091-061 \$2.75 each

SPECIFICATIONS

No. 91 and 92 Cabinet	
Floor Space	14" x 26"
Height to No. 91 Press Die	38-1/2"
Height to No. 92 Press Die	40-1/2"
Weight	75 lbs.

Each punch and die rack holds nine sets of punches and dies—7/8" or 1-13/16" O.D. die sizes or 5 sets of—1-15/16" or 2-7/16" O.D. die sizes. Holes are provided for convenient wall mounting where cabinet is not used.



(091-060)

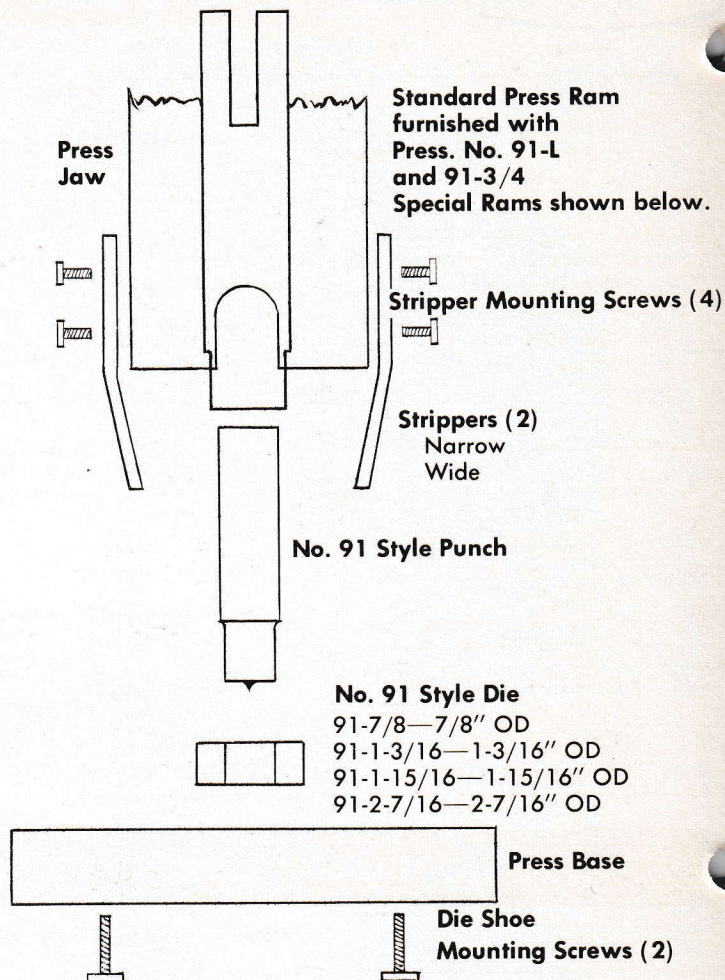
\$97.00

No. 91 Cabinet
Less Punch and Die Racks

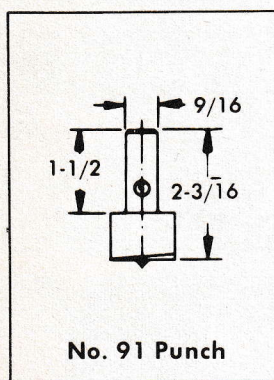
No. 91 TOOLING SET-UP

TOOLING USED WITH OR WITHOUT WORKTABLE ASSEMBLY

Tooling shown on this page: Press Rams, Punch, Dies, Strippers and all Mounting Screws are common in tooling up a 91 Series Press for use either with or without Worktable Assembly. Die Shoes are required when tooling up Press without Worktable (see page 15). Die Adapters are required when tooling up Press with Worktable (see page 15).



PUNCH



NO. 91 DIES

No. 91-7/8	No. 91-1-3/16	No. 91-1-15/16	No. 91-2-7/16

STRIPPER

<p>Narrow (2) (091-010)LH (091-009)RH USED ON PUNCHES AND DIES TO AND INCLUDING 1" (set of narrow strippers included with Press)</p> <p>\$1.80 per set</p>	<p>Wide (2) (091-012)LH (091-011)RH USED ON PUNCHES AND DIES 1-1/64 TO AND INCLUDING 2"</p> <p>\$6.30 per set</p>
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RAMS

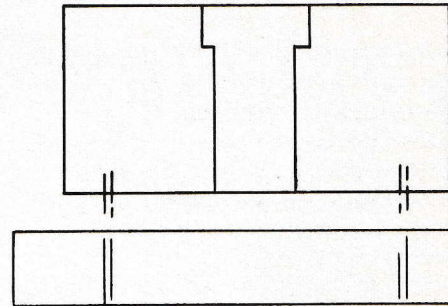
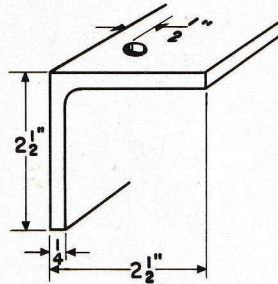
<p>91-L(091-156)</p> <p>\$12.20</p>	<p>91-3/4(091-065)</p> <p>091-064 Bushing to Convert 91-3/4 Ram to Accept 9/16" Punch Shanks \$3.00</p> <p>\$7.20</p>	<p>NOTE: Press furnished with Standard Ram. The 91-L and 91-3/4 Ram are used only on 2-1/16" to 5" holes and some special shapes. Catalog advises when these Rams are necessary.</p>
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No. 91 TOOLING SET-UP

TOOLING UP PRESS TO OPERATE WITHOUT WORKTABLE

Refer to page 13 for work table explanation

When tooling up a No. 91 Series Press to operate without a Worktable, used for angle iron punching (see illustration) channel and flat stock without gauging, one of four Die Shoes, shown below, must be used to hold the Die. Die Shoe requirement is in addition to the Tooling on page 14.



Die Shoe

Four ID sizes shown below

Press Base

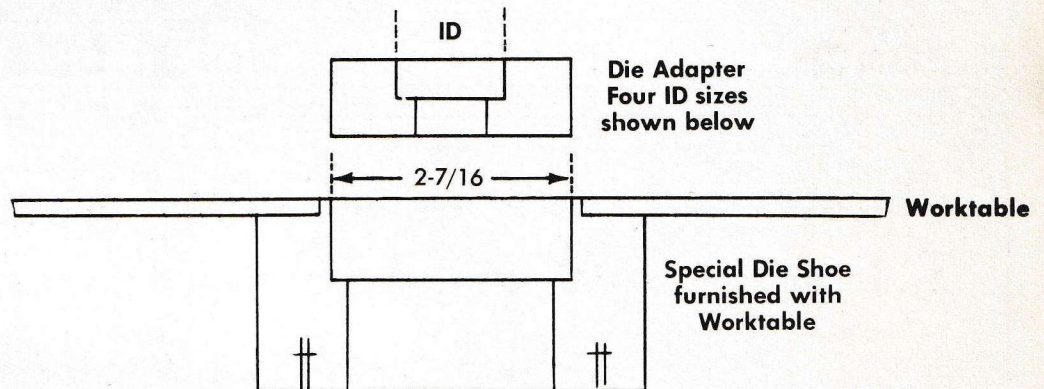
NO. 91 DIE SHOES

<p>No. 91-7/8 (091-024)</p> <p>Price - \$10.00</p>	<p>No. 91-1-3/16 (091-025)</p> <p>Price - \$12.00</p>	<p>No. 91-1-15/16 (091-026)</p> <p>Price - \$12.50</p>	<p>No. 91-2-7/16 (091-027)</p> <p>Price - \$12.95</p>
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TOOLING UP PRESS TO OPERATE WITH WORKTABLE

Refer to page 13 for worktable explanation

Worktable is used for flat stock punching where repeated runs make gauging mandatory. When tooling up a No. 91 Series Press to operate with worktable, one of four die adapters, shown below, must be used in the Special Die Shoe furnished with the Worktable. Die Adapter requirement is in addition to the Tooling on Page 14.



Die Adapter
Four ID sizes shown below

Worktable

Special Die Shoe
furnished with
Worktable

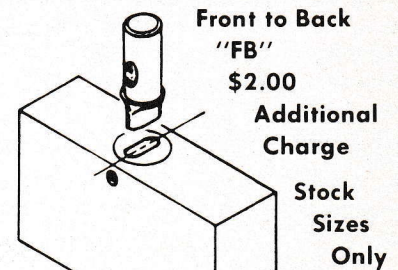
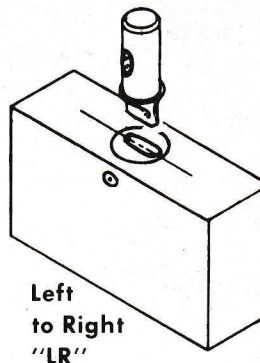
NO. 91 DIE ADAPTERS

<p>No. 91-7/8 DA (091-306)</p> <p>Price—\$7.50</p>	<p>No. 91-1-3/16 DA (091-307)</p> <p>Price—\$7.50</p>	<p>No. 91-1-15/16 DA (091-308)</p> <p>Price—\$7.50</p>	<p>No. 91-2-7/16 DA (091-309)</p> <p>USED AS SPACER TO RAISE DIES PROPER HEIGHT. Price—\$1.50</p>
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All rounds, ovals, rectangles and squares listed in this catalog are in stock. All non-stock punches and dies require a minimum of two (2) weeks before delivery. All round and shaped dies have a flat top except No. 10, 20, and 40 dies which are available in crown, serrated or flat top. All round, ovals, rectangles and squares are stocked with center point. No. 91 Punches from 5/8" round on up will be shipped with 1/8" shear unless specified.

DIE POSITIONS

Rectangles, ovals and other irregular punches and dies will be spotted for left to right mounting unless specified for front to back.



\$2.00

Additional Charge

Stock Sizes Only

Please include this information with order:

- specify type and thickness of material to be punched
- specify style of punch and die
- specify model and make of press
- specify round or shaped punches or dies
- specify any deviation from standard size or style

Determine proper die clearance:

CLEARANCE			
GAGE	.005	.021*	.037**
22-12	X		
11 thru 7/32		X	
7/32 thru 1/2			X

* use next 1/64" larger die

** use next 1/32" larger die

PUNCH RANGE	1/16 to 5/8	41/64 to 7/8	57/64 to 1-1/2	1-33/64 to 2	2-1/32 to 3	3-1/32 to 4	4-1/32 to 5
No Shear—No Center Pt.	Add \$2.50	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50
No Shear—w/Center Pt.	Standard	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50	Add \$4.50
High speed steel—91 rounds	5 x std. price	5 x std. price	5 x std. price	3 x std. price	2 x std. price	2 x std. price	2 x std. price
High speed steel used w/threaded dies	5 x std. price	5 x std. price	not available	not available	not available	not available	not available
High speed steel, 91 ovals, rect., squares	3 x std. price	3 x std. price	3 x std. price	3 x std. price	3 x std. price	3 x std. price	3 x std. price
High speed steel, threaded dies—ovals, rect., squares	5 x std. price	5 x std. price	not available	not available	not available	not available	not available
Non-stock rounds, ovals, rect., squares	USE NEXT LARGEST SIZE AND ADD 25%						
Stock and Non-stock ovals, squares, rect., where "B" is less than 3/32"	2 TIMES STANDARD PRICE						

TONS PRESSURE REQUIRED TO PUNCH MILD STEEL PLATE

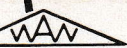
Metal Gage	Thickness in Inches	Hole Diameter in Inches														
		1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1
20	0.036	0.35	0.53	0.71	0.88	1.1	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.8
18	0.048	0.47	0.71	0.94	1.2	1.4	1.7	1.9	2.1	2.4	2.6	2.8	3.1	3.3	3.5	3.8
1/16 or 16	0.060	0.59	0.89	1.2	1.5	1.8	2.1	2.4	2.7	2.9	3.2	3.5	3.8	4.1	4.4	4.7
14	0.075	0.74	1.1	1.5	1.9	2.2	2.6	2.9	3.3	3.7	4.1	4.4	4.8	5.2	5.5	5.9
12	0.105	1.0	1.6	2.1	2.6	3.1	3.6	4.1	4.7	5.2	5.7	6.2	6.7	7.2	7.7	8.3
1/8 or 11	0.120	1.2	1.8	2.4	3.0	3.5	4.1	4.7	5.3	5.9	6.5	7.1	7.7	8.3	8.8	9.4
10	0.135		2.0	2.7	3.3	4.0	4.6	5.3	6.0	6.6	7.3	8.0	8.6	9.3	10.0	10.6
3/16	0.187		2.8	3.7	4.6	5.5	6.5	7.4	8.3	9.2	10.2	11.1	12.0	12.9	13.8	14.8
1/4	0.250			4.9	6.2	7.4	8.6	9.8	11.0	12.3	13.5	14.8	16.0	17.2	18.5	19.7
5/16	.312				7.8	9.2	10.8	12.3	13.8	15.4	16.9	18.4	20.	21.5	23.0	24.6
3/8	0.375					11.1	13.0	14.8	16.6	18.5	20.3	22.1	24.0	25.8	27.7	29.5
1/2	0.500						17.2	19.7	22.1	24.6	27.1	29.5	32.0	34.4	36.9	39.4
5/8	0.625									30.8	33.8	36.9	40.0	43.0	46.1	49.2
3/4	0.750										40.6	44.3	48.0	51.9	55.4	59.0
7/8	.875											51.6	56	60.2	64.6	69.0
1	1.00												64	68.8	73.8	78.8

Above chart based upon shearing strength of 25 tons per square inch for mild steel.

No. 91 PUNCHES AND DIES

ROUNDS

Hole Size	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe Style	Price	Die Adapter	Price
1/16	91	\$2.00	91-7/8	\$2.00	\$4.00	Narrow	\$1.80		\$10.00		\$7.50
5/64	91	2.00	91-7/8	2.00	4.00	Narrow	1.80		10.00		7.50
3/32	91	2.00	91-7/8	2.00	4.00	Narrow	1.80		10.00		7.50
7/64	91	2.00	91-7/8	2.00	4.00	Narrow	1.80		10.00		7.50
1/8	91	2.00	91-7/8	2.00	4.00	Narrow	1.80		10.00		7.50
9/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
5/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
11/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
3/16	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
13/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
7/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
15/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
1/4	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
17/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
9/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
19/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
5/16	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
21/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
11/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80	Use 091-024 91-7/8" Die Shoe	10.00	Use 091-306 91-7/8" Die Adapter	7.50
23/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
3/8	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
25/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
13/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
27/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
7/16	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
29/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
15/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
31/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
1/2	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
33/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
17/32	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
35/64	91	1.90	91-7/8	1.90	3.80	Narrow	1.80		10.00		7.50
9/16	91	1.35	91-7/8	1.35	2.70	Narrow	1.80		10.00		7.50
37/64	91	3.80	91-7/8	3.80	7.60	Narrow	1.80		10.00		7.50
19/32	91	3.25	91-7/8	3.25	6.50	Narrow	1.80		10.00		7.50
39/64	91	3.80	91-7/8	3.80	7.60	Narrow	1.80		10.00		7.50
5/8	91	3.25	91-7/8	3.25	6.50	Narrow	1.80		10.00		7.50
41/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80	Use 091-025 91-1-3/16" Die Shoe	12.00	Use 091-307 91-1-3/16" Die Adapter	7.50
21/32	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
43/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
11/16	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
45/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
23/32	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
47/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
3/4	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
49/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
25/32	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
51/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
13/16	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
53/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50



No. 91 PUNCHES AND DIES

ROUNDS

Hole Size	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe Style	Price	Die Adapter	Price
27/32	91	\$3.25	91-1-3/16	\$3.25	\$6.50	Narrow	\$1.80	Use 091-025 91-1-3/16" Die Shoe	\$12.00	Use 091-307 91-1-3/16" Die Adapter	\$7.50
55/64	91	3.80	91-1-3/16	3.80	7.60	Narrow	1.80		12.00		7.50
7/8	91	3.25	91-1-3/16	3.25	6.50	Narrow	1.80		12.00		7.50
57/64	91	5.20	91-1-15/16	5.20	10.40	Narrow	1.80	Use 091-026 1-15/16" Die Shoe	12.50	Use 091-308 91-1-15/16" Die Adapter	7.50
29/32	91	4.75	91-1-15/16	4.75	9.50	Narrow	1.80		12.50		7.50
59/64	91	5.20	91-1-15/16	5.20	10.40	Narrow	1.80		12.50		7.50
15/16	91	4.75	91-1-15/16	4.75	9.50	Narrow	1.80		12.50		7.50
61/64	91	5.20	91-1-15/16	5.20	10.40	Narrow	1.80		12.50		7.50
31/32	91	4.75	91-1-15/16	4.75	9.50	Narrow	1.80		12.50		7.50
63/64	91	5.20	91-1-15/16	5.20	10.40	Narrow	1.80		12.50		7.50
1	91	4.75	91-1-15/16	4.75	9.50	Narrow	1.80		12.50		7.50
1-1/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-1/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-3/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-1/16	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-5/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-3/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-7/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-1/8	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-9/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-5/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-11/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-3/16	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-13/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-7/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-15/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-1/4	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-17/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-9/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-19/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-5/16	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-21/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-11/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-23/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-3/8	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-25/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-13/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-27/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-7/16	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-29/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-15/32	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-31/64	91	5.20	91-1-15/16	5.20	10.40	Wide	6.30		12.50		7.50
1-1/2	91	4.75	91-1-15/16	4.75	9.50	Wide	6.30		12.50		7.50
1-33/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30	Use 091-027 91-2-7/16" Die Shoe	12.95	Use 091-309 91-2-7/16" Die Spacer	1.50
1-17/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-35/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-9/16	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-37/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-19/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-39/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50

No. 91 PUNCHES AND DIES

ROUNDS

Hole Size	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe Style	Price	Die Adapter	Price
1-5/8	91	\$8.95	91-2-7/16	\$7.95	\$16.90	Wide	\$6.30		\$12.95		\$1.50
1-41/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-21/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-43/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-11/16	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-45/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-23/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-47/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-3/4	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-49/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-25/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-51/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30	Use 091-027 91-2-7/16" Die Shoe	12.95	Use 091-309 91-2-7/16" Die Spacer	1.50
1-13/16	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-53/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-27/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-55/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-7/8	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-57/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-29/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-59/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-15/16	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-61/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-31/32	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
1-63/64	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50
2	91	8.95	91-2-7/16	7.95	16.90	Wide	6.30		12.95		1.50

No. 91 PUNCHES AND DIES

DECIMAL ROUNDS

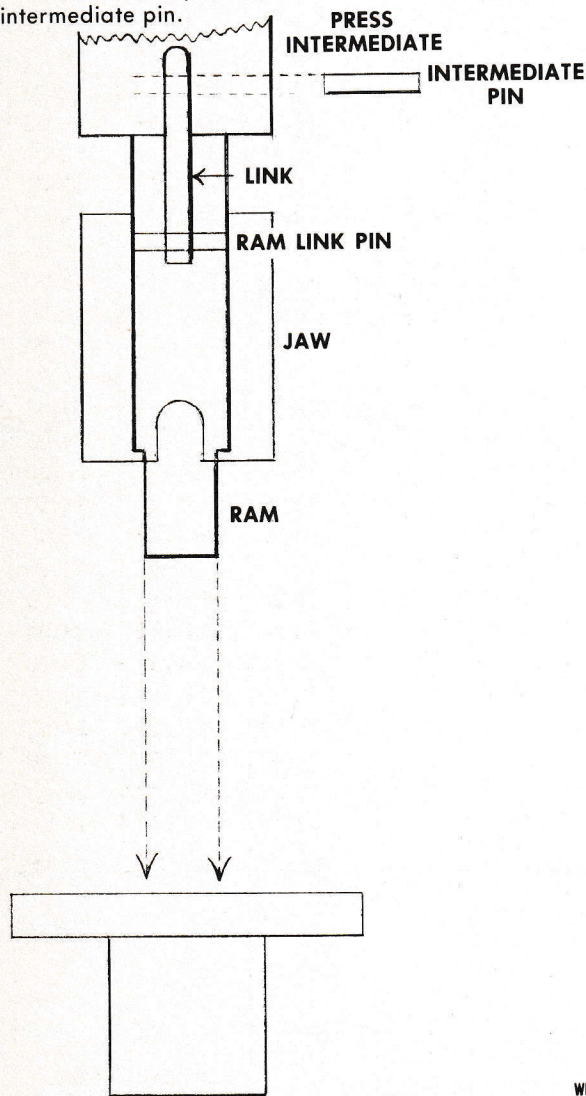
Hole Size	Incre.	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
									Die Shoe Style	Price	Die Adapter	Price
Min. .062 Max. .625	Any decimal or drill size	91	\$4.95	91-7/8	\$4.95	\$9.90	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
Min. .626 Max. .875		91	5.35	91-1-3/16	5.35	10.70	Narrow	1.80	091-025	12.00	091-307	7.50
Min. .876 Max. 1.000		91	6.20	91-1-15/16	6.20	12.40	Narrow	1.80	091-026	12.50	091-308	7.50
Min. 1.001 Max. 1.500		91	6.20	91-1-15/16	6.20	12.40	Wide	6.30	091-026	12.50	091-308	7.50
Min. 1.501 Max. 2.000		91	8.40	91-2-7/16	8.40	16.80	Wide	6.30	091-027	12.95	091-309	1.50

No. 91 TOOLING SET-UP

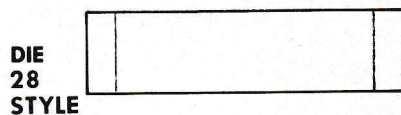
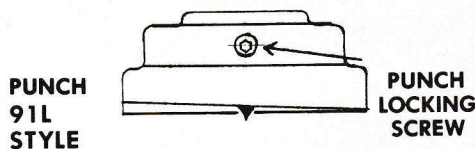
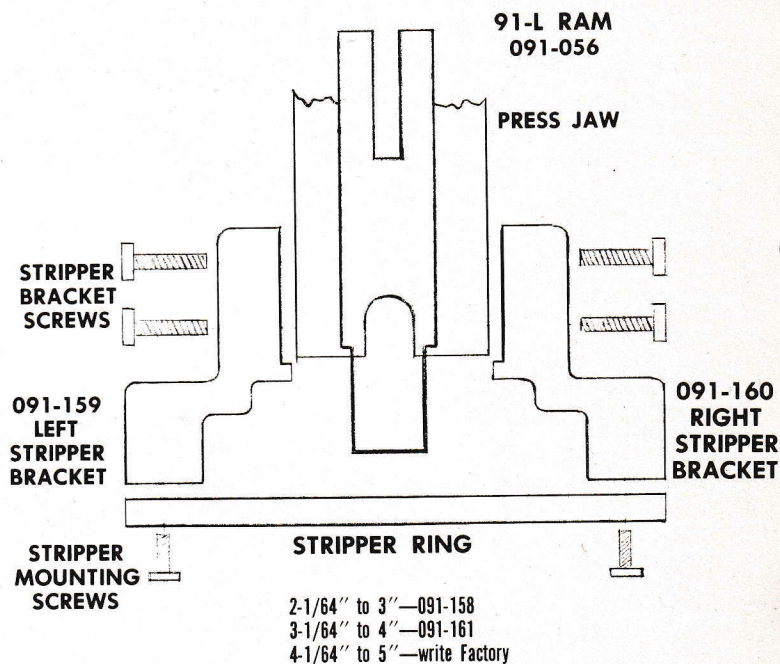
2-1/16 through 5"

To adapt the standard 91, 92, 93 and 94 hand lever presses to take this series of punches and dies the press ram must be changed to the 91L press ram. The method of changing the ram is pictured on the left below.

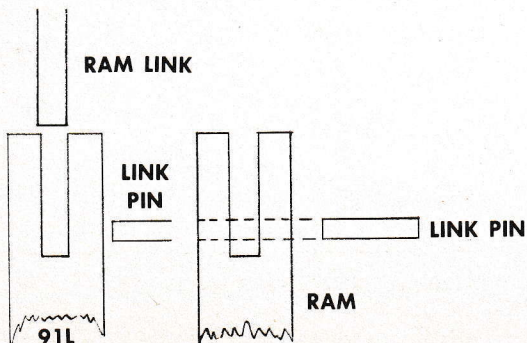
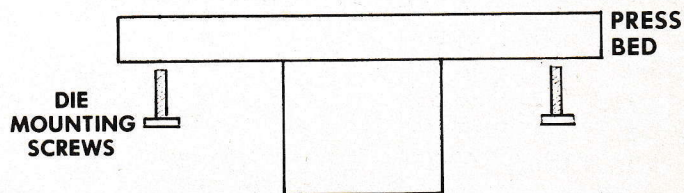
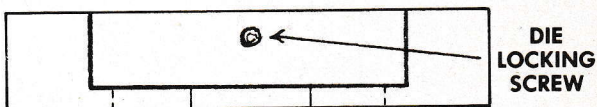
To change from the standard ram to the 91L ram for 2-1/16" to 5" holes first remove the intermediate pin and slide ram and link out of the punch jaw. Remove the link pin and link and install in the 91L ram. Re-install the 91L ram into the punch jaw and reinsert the intermediate pin.



NECESSARY TOOLING



DIE SHOE
091-157—2-1/64" to 3"
091-162—3-1/64" to 4"
write Factory—4-1/64" to 5"



W. A. WHITNEY MFG. CO.

All Prices F.O.B. Rockford Plant: Subject to change without notice.



No. 91 PUNCHES AND DIES

ROUNDS 2-1/16" thru 5"

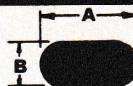
See Complete Tooling Set-up on Page 20

Hole Size	Punch Style	Punch Price	Die O.D.	Die Price	Price Per Set	Stripper Ring	Stripper Ring Price	Stripper Mounting Brackets	Stripper Mounting Brackets Set Price	Die Shoe Style	Die Shoe Price
2-1/16	91L	\$38.00	28-3-3/4 OD	\$17.00	\$55.00	091-158	\$15.50		\$18.30	091-157	\$18.00
2-1/8	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-3/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-1/4	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-5/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-3/8	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-7/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-1/2	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-9/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-5/8	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-11/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-3/4	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50		18.30	091-157	18.00
2-13/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50	Right	18.30	091-157	18.00
2-7/8	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50	091-160	18.30	091-157	18.00
2-15/16	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50	\$9.15 each	18.30	091-157	18.00
3	91L	38.00	28-3-3/4 OD	17.00	55.00	091-158	15.50	Left	18.30	091-157	18.00
3-1/16	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30	091-159	18.30	091-162	21.00
3-1/8	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30	\$9.15 each	18.30	091-162	21.00
3-3/16	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-1/4	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-5/16	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-3/8	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-7/16	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-1/2	91L	44.00	28-4-3/4 OD	20.00	64.00	091-161	19.30		18.30	091-162	21.00
3-9/16	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-5/8	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-11/16	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-3/4	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-3/16	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-7/8	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
3-15/16	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
4	91L	44.00	28-4-3/4 OD	21.00	65.00	091-161	19.30		18.30	091-162	21.00
4-1/16	91L	60.00	Die and Die Shoe—One Assembly—Priced upon Application			Stripper Ring and Stripper Mounting Brackets—Priced upon Application			Die and Die Shoe One Assembly Priced Upon Application		
4-1/8	91L	60.00									
4-3/16	91L	60.00									
4-1/4	91L	60.00									
4-5/16	91L	60.00									
4-3/8	91L	60.00									
4-7/16	91L	60.00									
4-1/2	91L	60.00									
4-9/16	91L	60.00									
4-5/8	91L	60.00									
4-11/16	91L	60.00									
4-3/4	91L	60.00									
4-13/16	91L	60.00									
4-7/8	91L	60.00									
4-15/16	91L	60.00									
5	91L	60.00									

ALL THE ABOVE PUNCHES AND DIES MUST HAVE THE 91L RAM (PART NO. 091-156) INSTALLED. PRICE EACH \$12.20.

No. 91 PUNCHES AND DIES

OVALS

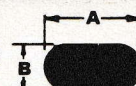


Hole Size B A	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe Style	Price	Die Adapter	Price
1/8 x 1/4	91	\$10.35	91-7/8	\$10.35	\$20.70	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
1/8 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/8 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/8 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/8 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/8 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/8 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/8 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/8 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/8 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1/8 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/16 x 1/4	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
3/16 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
3/16 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
3/16 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/16 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/16 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/16 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
7/32 x 1/4	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
7/32 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
7/32 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
7/32 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
7/32 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
7/32 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
7/32 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
7/32 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
7/32 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
7/32 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
7/32 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1/4 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/4 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/4 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/4 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/4 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/4 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/4 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/4 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/4 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1/4 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
9/32 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
9/32 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
9/32 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
9/32 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
9/32 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
9/32 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50

Where "B" is less than 3/32" double price shown.
Any size not listed, use next largest size, add 25%.

No. 91 PUNCHES AND DIES

OVALS



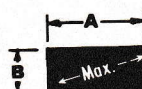
Hole Size B A	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe Style	Price	Die Adapter	Price
9/32 x 1-1/4	91	\$18.20	91-1-15/16	\$18.20	\$36.40	Wide	\$6.30	091-026	\$12.50	091-308	\$7.50
9/32 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
9/32 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
9/32 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
5/16 x 3/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
5/16 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
5/16 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
5/16 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
5/16 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
5/16 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
5/16 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
5/16 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
5/16 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
5/16 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/8 x 1/2	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/8 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
3/8 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
3/8 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
3/8 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
3/8 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/8 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/8 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/8 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1/2 x 5/8	91	10.35	91-7/8	10.35	20.70	Narrow	1.80	091-024	10.00	091-306	7.50
1/2 x 3/4	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/2 x 7/8	91	12.70	91-1-3/16	12.70	25.40	Narrow	1.80	091-025	12.00	091-307	7.50
1/2 x 1	91	15.15	91-1-15/16	15.15	30.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/2 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/2 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1/2 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1/2 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
5/8 x 3/4	91	15.25	91-1-3/16	15.25	30.50	Narrow	1.80	091-025	12.00	091-307	7.50
5/8 x 7/8	91	15.25	91-1-3/16	15.25	30.50	Narrow	1.80	091-025	12.00	091-307	7.50
5/8 x 1	91	18.20	91-1-15/16	18.20	36.40	Narrow	1.80	091-026	12.50	091-308	7.50
5/8 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
5/8 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
5/8 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
5/8 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/4 x 7/8	91	15.25	91-1-3/16	15.25	30.50	Narrow	1.80	091-025	12.00	091-307	7.50
3/4 x 1	91	18.20	91-1-15/16	18.20	36.40	Narrow	1.80	091-026	12.50	091-308	7.50
3/4 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/4 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
3/4 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
3/4 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1 x 1-1/4	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1 x 1-1/2	91	18.20	91-1-15/16	18.20	36.40	Wide	6.30	091-026	12.50	091-308	7.50
1 x 1-3/4	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50
1 x 2	91	25.70	91-2-7/16	25.70	51.40	Wide	6.30	091-027	12.95	091-309	1.50

Where "B" is less than 3/32" double price shown.

Any size not listed, use next largest size, add 25%.

No. 91 PUNCHES AND DIES

RECTANGLE



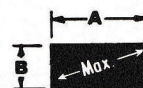
Hole Size B A	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use with Worktable	
								Die Shoe Style	Price	Die Adapter	Price
1/8 x 1/4	91	\$14.65	91-7/8	\$16.40	\$31.05	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
1/8 x 3/8	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
1/8 x 1/2	91	12.20	91-7/8	13.65	25.85	Narrow	1.80	091-024	10.00	091-306	7.50
1/8 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
1/8 x 3/4	91	13.35	91-1-3/16	14.15	27.50	Narrow	1.80	091-025	12.00	091-307	7.50
1/8 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
1/8 x 1	91	15.15	91-1-15/16	17.15	32.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/8 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/8 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/8 x 1-1/2	91	21.50	91-2-7/16	27.75	49.25	Wide	6.30	091-027	12.95	091-309	1.50
1/8 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/16 x 1/4	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 3/8	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 1/2	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
3/16 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
3/16 x 3/4	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
3/16 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
3/16 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
3/16 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
3/16 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
3/16 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/16 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1/4 x 3/8	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
1/4 x 1/2	91	12.20	91-7/8	13.65	25.85	Narrow	1.80	091-024	10.00	091-306	7.50
1/4 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
1/4 x 3/4	91	13.35	91-1-3/16	14.15	27.50	Narrow	1.80	091-025	12.00	091-307	7.50
1/4 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
1/4 x 1	91	15.15	91-1-15/16	17.15	32.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/4 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/4 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/4 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1/4 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
5/16 x 3/8	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
5/16 x 1/2	91	14.65	91-7/8	16.40	31.05	Narrow	1.80	091-024	10.00	091-306	7.50
5/16 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
5/16 x 3/4	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/16 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/16 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/16 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
5/16 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
5/16 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
5/16 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/8 x 1/2	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-306	7.50
3/8 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-306	7.50
3/8 x 3/4	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-307	7.50

Where "B" is less than 3/32" double price shown.

Any size not listed, use next largest size, add 25%.

No. 91 PUNCHES AND DIES

RECTANGLE



Hole Size B A	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use with Worktable	
								Die Shoe Style	Price	Die Adapter	Price
3/8 x 7/8	91	\$18.20	91-1-15/16	\$20.60	\$38.80	Narrow	\$1.80	091-026	\$12.50	091-308	\$7.50
3/8 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
3/8 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
3/8 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
3/8 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/8 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
7/16 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
7/16 x 3/4	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
7/16 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
7/16 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
7/16 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
7/16 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
7/16 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
7/16 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1/2 x 5/8	91	16.00	91-1-3/16	17.00	33.00	Narrow	1.80	091-025	12.00	091-307	7.50
1/2 x 3/4	91	15.15	91-1-15/16	17.15	32.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/2 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
1/2 x 1	91	15.15	91-1-15/16	17.15	32.30	Narrow	1.80	091-026	12.50	091-308	7.50
1/2 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/2 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
1/2 x 1-1/2	91	21.50	91-2-7/16	27.75	49.25	Wide	6.30	091-027	12.95	091-309	1.50
1/2 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
5/8 x 3/4	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/8 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/8 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
5/8 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
5/8 x 1-1/4	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
5/8 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
5/8 x 1-3/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/4 x 7/8	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
3/4 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
3/4 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
3/4 x 1-1/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/4 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
3/4 x 1-3/4	91	21.50	91-2-7/16	27.75	49.25	Wide	6.30	091-027	12.95	091-309	1.50
7/8 x 1	91	18.20	91-1-15/16	20.60	38.80	Narrow	1.80	091-026	12.50	091-308	7.50
7/8 x 1-1/8	91	18.20	91-1-15/16	20.60	38.80	Wide	6.30	091-026	12.50	091-308	7.50
7/8 x 1-1/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
7/8 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1 x 1-1/8	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1 x 1-1/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1-1/8 x 1-1/4	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50
1-1/8 x 1-1/2	91	25.80	91-2-7/16	33.30	59.10	Wide	6.30	091-027	12.95	091-309	1.50

Where "B" is less than 3/32" double price shown.

Any size not listed, use next largest size, add 25%.

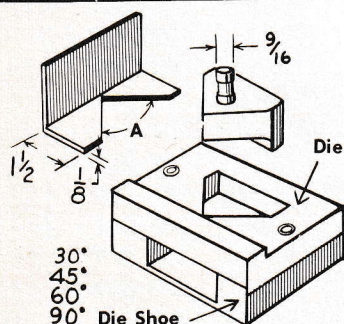
No. 91 PUNCHES AND DIES

SQUARES

Hole Size	Punch Style	Punch Price	Die OD	Die Price	Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use with Worktable	
								Die Shoe Style	Price	Die Adapter	Price
1/8	91	\$ 8.50	91-7/8	\$ 8.50	\$17.00	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
5/32	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
3/16	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
7/32	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
1/4	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
9/32	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
5/16	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
11/32	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
3/8	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
13/32	91	8.50	91-7/8	8.50	17.00	Narrow	1.80	091-024	10.00	091-306	7.50
7/16	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
15/32	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
1/2	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
17/32	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
9/16	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
19/32	91	9.80	91-1-3/16	9.80	19.60	Narrow	1.80	091-025	12.00	091-307	7.50
5/8	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
11/16	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
3/4	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
13/16	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
7/8	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
15/16	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
1	91	13.10	91-1-15/16	13.10	26.20	Narrow	1.80	091-026	12.50	091-308	7.50
1-1/16	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50
1-1/8	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50
1-3/16	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50
1-1/4	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50
1-5/16	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50
1-3/8	91	16.10	91-2-7/16	16.10	32.20	Wide	6.30	091-027	12.95	091-309	1.50

NO. 91 SPECIAL PURPOSE PUNCHES AND DIES

STOCK

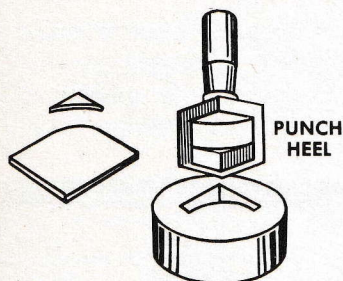


ANGLE IRON NOTCHING

Angle iron notching die sets are used for notching before bending the angle iron. The fixed material gage is for 1/8" thick angles only. Punch heel serves as a guide and helps insure long tool life. Maximum width of angle leg is 1-1/2" or any smaller dimension.

Angle "A" Dimension	Punch Number	Punch Price	Die Number	Die Price	Punch & Die Price Per Set	Stripper Style	Stripper Price	Use Without Worktable		Use With Worktable
								Die Shoe	Price	
30°	091-140	\$27.25	091-144	\$61.50	\$88.75	Wide	\$6.30	091-195	\$4.25	Not Available
45°	091-141	27.25	091-145	61.50	88.75	Wide	6.30	091-195	4.25	
60°	091-142	27.25	091-146	61.50	88.75	Wide	6.30	091-195	4.25	
90°	091-143	11.70	091-147	28.40	40.10	Wide	6.30	091-195	4.25	

NON-STOCK



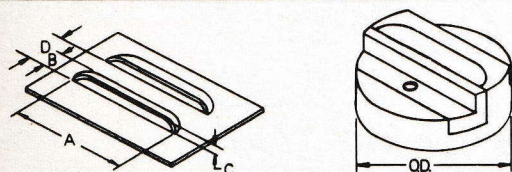
CORNER ROUNDING

Used to round corners on sheet and plate material. The heel of the punch acts as a gage and a punch guide to eliminate rapid tool wear. Please specify type and thickness of the material to be punched to determine clearance to avoid undue shipping delay until this information is available. Use wide strippers at \$6.30 per set.

Size of Radius	Maximum Thickness of Material	Punch Number	Die Number	Die OD	Punch & Die Price Per Set	Use Without Die Shoe	Worktable Price	Use with Worktable Die Adapter	Price
1/16"	16 Ga.	091-238	091-239	91-1-3/16	\$57.50	091-025	\$12.00	091-307	\$7.50
1/8"	14 Ga.	091-240	091-241	91-1-3/16	57.50	091-025	12.00	091-307	7.50
3/16"	10 Ga.	091-242	091-243	91-1-3/16	57.50	091-025	12.00	091-307	7.50
1/4"	10 Ga.	091-244	091-245	91-1-3/16	57.50	091-025	12.00	091-307	7.50
5/16"	3/16	091-246	091-247	91-1-3/16	57.50	091-025	12.00	091-307	7.50
3/8"	3/16	091-248	091-249	91-1-3/16	57.50	091-025	12.00	091-307	7.50
1/2"	1/4	091-250	091-251	91-1-15/16	83.40	091-026	12.50	091-308	7.50
5/8"	1/4	091-252	091-253	91-1-15/16	83.40	091-026	12.50	091-308	7.50
3/4"	1/4	091-254	091-255	91-1-15/16	83.40	091-026	12.50	091-308	7.50
1"	1/4	091-256	091-257	91-2-7/16	96.60	091-027	12.95	091-309	1.50
1-1/2"	3/16	091-258	091-259	Die & Die Shoe One Assembly with front delivery	132.40	Die & Die Shoe one Assembly	Included in Punch & Die Set Price	cannot be used with Worktable	
2"	10 Ga.	091-260	091-261		132.40				
2-1/2"*	10 Ga.	091-262	091-263		156.00				

* Uses 91-3/4" ram. Part number 091-065. Price \$7.20. See page 20.

STOCK



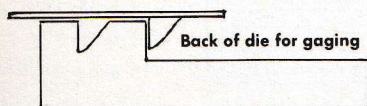
LOUVRE

When the location of the first louvre to be punched has been determined and punched, the material is slid to the rear of the die and pulled forward. This makes use of the back of the die for accurate gaging of dimension D. This feature when used with the 91 worktable for side gaging makes accurate, fast, inexpensive louvres possible.

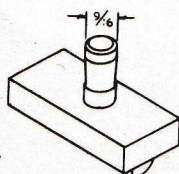
Louvre punches and dies can be mounted so the material can be fed from the side. This makes the throat depth less critical as long, narrow strips can be fed with the width of the strip the critical dimension.

Other sizes of louvre punches and dies are available—please write for quotes. Please specify type and thickness of the material to be punched to determine clearance and avoid undue delay until this information is available.

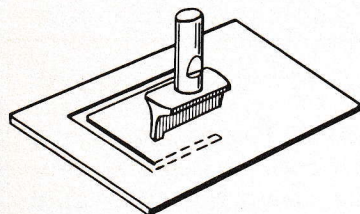
Use wide strippers at \$6.30 per set.



Die (side view) showing louvre punched, material slid to rear of die and pulled forward for gaging.



"A" Length of Louvre	"B" Depth of Louvre	"C" Height of Louvre	"D" Front to Front	Punch and Die Assy. Number	Die OD	Punch & Die Price Per Set	Use Without Worktable		Use With Worktable	
							Die Shoe	Price	Die Adapter	Price
1-1/2"	1/2"	3/16"	3/4"	091-035	91-1-15/16	\$80.00	091-026	\$12.50	091-308	\$7.50
2"	1/2"	3/16"	3/4"	091-040	91-2-7/16	82.50	091-027	12.95	091-309	1.50

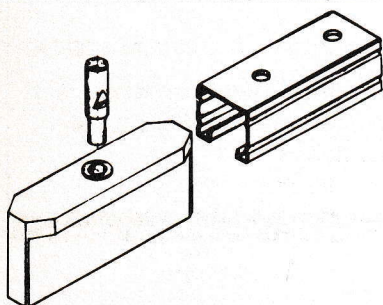


SLOTING PUNCHES & DIES

NON-STOCK

Used for making large cutouts in sheet stock. Note square guide used to make square corners. Punch guide also locates in preceding slot to assure smooth cut. No starting hole is required for this punch. Please specify gage and material thickness to avoid undue delay in delivery. Use wide strippers at \$6.30 per set.

Width	Length	Punch No.	Die Size	Die OD	Punch & Die Price Per Set	Use Without Worktable		Use with Worktable	
						Die Shoe	Price	Die Adapter	Price
1/8"	1-1/4"	091-211	1/8 x 1-1/4	1-15/16	\$45.80	091-026	\$12.50	091-308	\$7.50
3/16"	1-1/2"	091-212	3/16 x 1-1/2	2-7/16	66.10	091-027	12.95	091-309	1.50
1/4"	1-5/8"	091-213	1/4 x 1-5/8	2-7/16	66.10	091-027	12.95	091-309	1.50
5/16"	1-3/4"	091-214	5/16 x 1-3/4	2-7/16	66.10	091-027	12.95	091-309	1.50
3/8"	1-7/8"	091-215	3/8 x 1-7/8	2-7/16	66.10	091-027	12.95	091-309	1.50
7/16"	1-7/8"	091-216	7/16 x 1-7/8	2-7/16	66.10	091-027	12.95	091-309	1.50
1/2"	1-7/8"	091-233	1/2 x 1-7/8	2-7/16	66.10	091-027	12.95	091-309	1.50



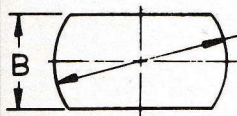
UNISTRUT FRAME PUNCHING

NON-STOCK

The die shoe is designed to center the section and automatically center the holes being punched. Listed below is the maximum round hole which can be punched in each section along with the die shoe size, punch and die. Standard No. 91 narrow strippers are used for all sizes.

Square, oval and rectangular punches and dies also available.

Unistrut Section Number	Size	Maximum Dia. Hole Punched	Punch Style	Punch Price	Die Style	Die Price	Stripper Style	Stripper Price	Use Without Worktable		Use With Worktable	
									Die Shoe	Price	Die Shoe	Price
P-1000	1-5/8 x 1-5/8	11/16	See 91		28XX 1-1/4 OD	\$4.00	Narrow	\$1.80	091-082	\$55.85	Not Available with Work Table	
P-1100	1-5/8 x 1-5/8	11/16			28XX 1-1/4 OD	4.00	Narrow	1.80	091-082	55.85		
P-2000	1-5/8 x 1-5/8	11/16			28XX 1-1/4 OD	4.00	Narrow	1.80	091-082	55.85		
P-3000	1-5/8 x 1-5/8	11/16			28XX 1-1/4 OD	4.00	Narrow	1.80	091-082	55.85		
P-5500	1-5/8 x 2-7/16	11/16			28XX 1-1/4 OD	4.00	Narrow	1.80	091-082	55.85		
P-4000	1-5/8 x 13/16	9/16	(Do not go over Maximum Diameter Hole Punched)		10	1.35	Narrow	1.80	091-083	55.85		
P-6000	13/16 x 13/16	9/32			091-086	4.90	Narrow	1.80	091-084	55.85		
P-7000	13/16 x 13/32	9/32			091-086	4.90	Narrow	1.80	091-084	55.85		
A-1000	1-1/4 x 1-1/4	1/2			10	1.35	Narrow	1.80	091-085	55.85		
A-4000	1-1/4 x 1-1/4	1/2			10	1.35	Narrow	1.80	091-085	55.85		
A-5000	1-1/4 x 1-1/4	1/2			10	1.35	Narrow	1.80	091-329	140.00		

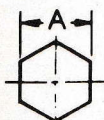


TYPE "P"

NON-STOCK

Specify type and thickness of material to be punched. This information is extremely important for proper clearance between punch and die. If type and thickness of material is not included with order, delay will occur until information is available.

"A" Maximum Diameter	"B" Flats	Die OD	Punch & Die Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
						Die Shoe	Price	Die Adapter	Price
5/8"	1/8 to 5/8"	91-7/8	\$37.90	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
7/8"	1/8 to 7/8"	91-1-3/16	46.45	Narrow	1.80	091-025	12.00	091-307	7.50
1-1/2"	1/8 to 1-1/2"	91-1-15/16	57.50	Wide	6.30	091-026	12.50	091-308	7.50
2"	1/8 to 2"	91-2-7/16	74.50	Wide	6.30	091-027	12.95	091-309	1.50

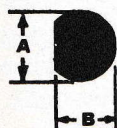


HEXAGON

NON-STOCK

Hex punches are made with "A" having a +.002—-.000 tolerance with .005 to .008 clearance. Specify type and thickness of material to be punched, to avoid undue delay until this information is available.

"A" Maximum	Die OD	Punch & Die Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
					Die Shoe	Price	Die Adapter	Price
1/2"	91-7/8	\$32.50	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
3/4"	91-1-3/16	37.50	Narrow	1.80	091-025	12.00	091-307	7.50
1-1/4"	91-1-15/16	46.75	Wide	6.30	091-026	12.50	091-308	7.50
1-11/16"	91-2-7/16	57.80	Wide	6.30	091-027	12.95	091-309	1.50

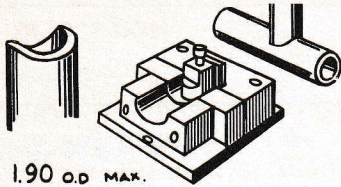


TYPE "D"

NON-STOCK

Specify type and thickness of material to be punched to determine clearance and avoid undue delay until this information is available.

"A" Maximum Diameter	"B"	Die OD	Punch & Die Price Per Set	Stripper Style	Price Per Set	Use Without Worktable		Use With Worktable	
						Die Shoe	Price	Die Adapter	Price
5/8"	1/8 to 5/8"	91-7/8	\$31.20	Narrow	\$1.80	091-024	\$10.00	091-306	\$7.50
7/8"	1/8 to 7/8"	91-1-3/16	36.40	Narrow	1.80	091-025	12.00	091-307	7.50
1-1/2"	1/8 to 1-1/2"	91-1-15/16	41.60	Wide	6.30	091-026	12.50	091-308	7.50
2"	1/8 to 2"	91-2-7/16	48.20	Wide	6.30	091-027	12.95	091-309	1.50

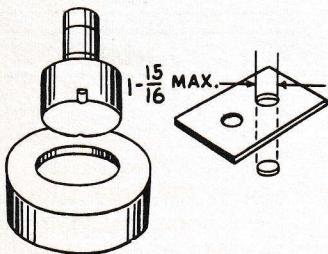


PIPE NOTCHING

STOCK

Used to notch 2 equal sizes of pipe to make a right angle "T" joint. A punch and die is necessary for each size of pipe, however the die holder assembly can be used to hold the die for all sizes. Other sizes available—contact factory for price. Pipe notching die set cannot be used with worktable.

Nominal Pipe Size	Outside Pipe Diameter	Pipe Wall Thickness	Punch No.	Punch Price	Die No.	Die Price	Punch & Die Price Per Set	Die Holder Assy. No.	Die Holder Price
3/4"	1.050	.113	091-178	\$46.40	091-180	\$58.50	\$104.90	091-170	\$51.20
1"	1.315	.133	091-181	46.40	091-182	58.50	104.90	091-170	51.20
1-1/4"	1.660	.140	091-184	46.40	091-185	58.50	104.90	091-170	51.20
1-1/2"	1.900	.145	091-187	46.40	091-188	58.50	104.90	091-170	51.20

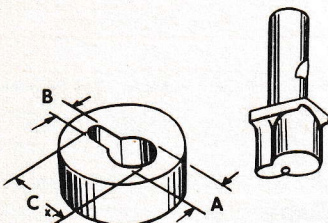


ELECTRICAL KNOCKOUT

NON-STOCK

The electrical knockout punch and die set partially punches out the slug leaving it held by one or two tabs (specify which type is desired when ordering). The slug can be removed when wanted by tapping with a screw driver. Set is designed for 18 gage thru 14 gage steel. Please specify type and thickness of the material to be punched to determine clearance and whether one or two tabs are desired. This will avoid undue delay until this information is available. Use narrow strippers at \$1.80 per set for 1/8 and 1/4" pipe size, wide strippers at \$6.30 per set for remainder.

Pipe Size	"A" Diameter	Punch Number	Die Number	Die OD	Punch & Die Price Per Set	Use Without Worktable		Use with Worktable	
						Die Shoe	Price	Die Adapter	Price
1/8"	7/16"	091-122	091-123	91-7/8	\$18.15	091-024	\$10.00	091-306	\$7.50
1/4"	9/16"	091-124	091-125	91-7/8	18.15	091-024	10.00	091-306	7.50
3/8"	11/16"	091-126	091-127	91-1-3/16	20.50	091-025	12.00	091-307	7.50
1/2"	7/8"	091-128	091-129	91-1-3/16	20.50	091-025	12.00	091-307	7.50
3/4"	1-1/8"	091-130	019-131	91-1-15/16	24.20	091-026	12.50	091-308	7.50
1"	1-3/8"	091-132	091-133	91-1-15/16	24.20	091-026	12.50	091-308	7.50
1-1/4"	1-11/16"	091-134	091-135	91-2-7/16	26.50	091-027	12.95	091-309	1.50
1-1/2"	1-15/16"	091-136	091-137	91-2-7/16	26.50	091-027	12.95	091-309	1.50

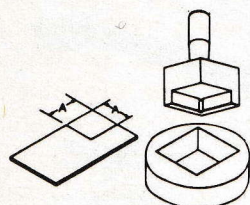


KEYHOLE

NON-STOCK

Keyholes allow assembly without removing the screw. Applications such as adjustable shelving, are one of the uses of this punch and die. The sizes shown will take standard pan head screws, round head screws and sheet metal screws. Please specify type and thickness of the material to be punched to determine clearance and avoid undue delay until this information is available. Use narrow strippers on #3-5, 6-10 and 12-14 Screw size at \$1.80 per set; wide strippers at \$6.30 per set on remaining sets.

Size of Screw	"A"	"B"	"C"	Punch Number	Die Number	Die OD	Punch & Die Price Per Set	Use Without Worktable		Use With Worktable	
								Die Shoe	Price	Die Adapter	Price
#3-#5	9/32	9/64	7/16	091-282	091-283	91-7/8	\$47.50	091-024	\$10.00	091-306	\$7.50
#6-#10	13/32	13/64	5/8	091-284	091-285	91-1-3/16	53.00	091-025	12.00	091-307	7.50
#12-1/4"	17/32	9/32	7/8	091-286	091-287	91-1-3/16	61.30	091-025	12.00	091-307	7.50
5/16"	21/32	11/32	1	091-288	091-289	91-1-15/16	61.30	091-026	12.50	091-308	7.50
3/8"	25/32	13/32	1-1/4	091-290	091-291	91-1-15/16	61.30	091-026	12.50	091-308	7.50
7/16"	13/16	15/32	1-3/8	091-292	091-293	91-1-15/16	61.30	091-026	12.50	091-308	7.50
1/2"	7/8	17/32	1-1/2	091-294	091-295	91-2-7/16	73.80	091-027	12.95	091-309	1.50
5/8"	1-1/16	21/32	1-5/8	091-296	091-297	91-2-7/16	73.80	091-027	12.95	091-309	1.50

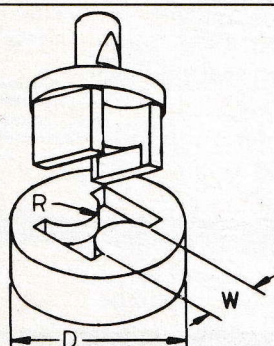


CORNER NOTCHING PUNCH

NON-STOCK

The punch heel guides the punch into the die eliminating rapid tool wear as well as acting as a work piece gage. Dimension "A" (maximum size of notch) is a guide only as these punches can be built in any size up to the maximum shown. Please specify type and thickness of the material to be punched to determine clearance and avoid undue delay until this information is available. Use wide strippers at \$6.30 per set.

"A" Maximum Size of Notch	Punch Number	Die Number	91 Die Size	Punch & Die Price Per Set	Use Without Worktable		Use With Worktable	
					Die Shoe	Price	Die Adapter	Price
3/4"	091-273	9112-09090	91-1-15/16	\$60.20	091-026	\$12.50	091-308	\$7.50
1-1/8"	091-274	9112-12840	91-2-7/16	68.75	091-027	12.95	091-309	1.50

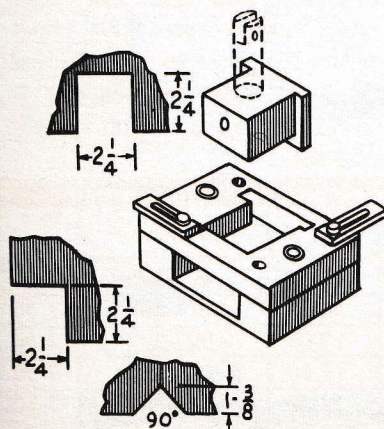


TRIMMING and PARTING

NON-STOCK

Trimming and parting sets are used to cut off strip steel and at the same time trim both ends with a smooth radius. Note the two punch guides that enter die before the cutting and trimming operation begins. This holds the punch in line with the die assuring straight cuts and prolonging tool life. Use wide strippers at \$6.30 per set.

Dimension "W"	Radius "R"	Maximum Thickness Mild Steel	Punch Number	Die Number	Die Size	Punch & Die Price Per Set	Use Without Worktable		Use With Worktable	
							Die Shoe	Price	Die Adapter	Price
1/4"	5/32	3/16	091-217	091-218	1-15/16 OD	\$137.00	091-026	\$12.50	091-308	\$7.50
3/8"	7/32	1/4	091-219	091-220	1-15/16 OD	137.00	091-026	12.50	091-308	7.50
1/2"	9/32	1/4	091-221	091-222	1-15/16 OD	137.00	091-026	12.50	091-308	7.50
5/8"	11/32	3/16	091-223	091-224	1-15/16 OD	137.00	091-026	12.50	091-308	7.50
3/4"	13/32	3/16	091-225	091-226	2-7/16 OD	156.00	091-027	12.95	091-309	1.50
1"	17/32	1/8	091-227	091-228	2-7/16 OD	156.00	091-027	12.95	091-309	1.50
1-1/2"	25/32	1/8			Die and Die Shoe One	228.00	Die and Die Shoe One Unit		Not Available	
									Not Available	



COMBINATION NOTCH & COPE

1/8" Thick Angle Iron

STOCK

This die set uses the 91L ram (see page 20). The versatility of this unit makes it a necessity in any shop. Punch guide can be used as back gage and eliminates rapid tool wear from possible misalignment.

COMBINATION NOTCH & COPE

Punch & Die Set including Die Shoe less 91L Ram 091-028 \$152.00
91L Press Ram 091-156 \$ 12.20

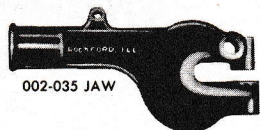


PARTS FOR HAND TOOLS

PARTS NO. 1 PUNCH



002-037 LEVER



002-035 JAW



002-039
INTERMEDIATE



DIE



002-041 SIDE LINK



002-043
ROLLER



002-052 DIE KEY



PUNCH



002-044 LEVER STUD



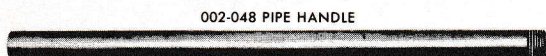
002-045



002-047
SNAP RING



002-046
INTERMEDIATE STUD



002-048 PIPE HANDLE

PARTS NO. 2 PUNCH



002-002 LEVER



002-003
INTERMEDIATE



002-004 SIDE LINK



002-005
ROLLER



DIE



PUNCH



002-052 KEY



002-006 LEVER STUD



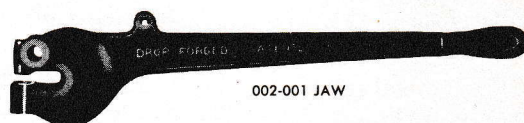
002-045
LEVER
STUD
NUTS



002-047
SNAP RING



002-046
INTERMEDIATE STUD



002-001 JAW

PARTS NO. 2 CHANNEL IRON PUNCH



002-002 LEVER



002-003
INTERMEDIATE



002-004 SIDE LINK



DIE



PUNCH



002-005
ROLLER



002-052 KEY



002-047
SNAP RING



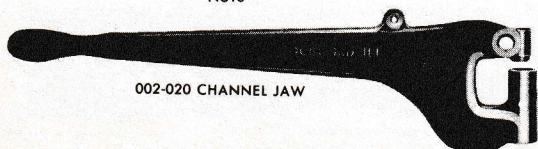
002-046
INTERMEDIATE STUD



002-045
LEVER
STUD
NUTS



002-006 LEVER STUD



002-020 CHANNEL JAW

PARTS NO. 4B PUNCH



004-002 LEVER



004-009 GAUGE



004-007
LEVER STUD
NUTS



004-006
LEVER STUD



004-016
GAUGE
SCREW



004-008
INTERMEDIATE
SCREW



DIE



004-005
1/4" ROLLER



004-003
INTERMEDIATE



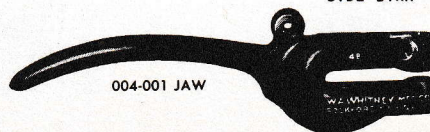
004-013
DIE KEY



PUNCH



004-004
SIDE LINK



004-001 JAW

NO. 1 HAND PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-035	Jaw	1	\$19.70
002-037	Lever	1	14.20
002-039	Intermediate	1	11.00
002-041	Side Link	2	1.70
002-043	Roller	1	.50
002-044	Lever studs	2	.80
002-045	Lever stud nuts	4	.20
002-046	Intermediate stud	1	.25
002-047	Snap Ring	1	.10
002-048	Pipe handle	1	2.00
002-052	Die key	1	.30

NO. 2 HAND PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-001	Jaw	1	\$15.50
002-002	Lever	1	13.20
002-003	Intermediate	1	9.80
002-004	Side link	2	1.40
002-005	Roller	1	.50
002-006	Lever stud	2	.80
002-045	Lever stud nuts	4	.20
002-046	Intermediate stud	1	.25
002-047	Snap ring	1	.10
002-052	Die Key	1	.30

NO. 2 CLOSE CORNER PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-022	Jaw	1	\$19.20
002-023	Die key	1	.25

Other parts same as No. 2

NO. 2 CHANNEL IRON PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-020	Channel Jaw	1	\$24.50

Other parts same as No. 2

NO. 2 CLOSE CORNER CHANNEL IRON PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-021	Jaw	1	\$32.10
002-023	Die key	1	.25

Other parts same as No. 2

NO. 4-B PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
004-001	Jaw	1	\$ 5.10
004-002	Lever	1	3.20
004-003	Intermediate	1	2.80
004-004	Side link	2	.60
004-005	1/4" Roller	1	.40
004-006	Lever stud	2	.50
004-007	Lever stud nut	4	.15
004-008	Intermediate screw	1	.40
004-009	Gage	1	.30
004-013	Die Key	1	.30
004-016	Gage screw	1	.35
004-017	Metal box (not shown)	1	1.80

NO. 4-D INDENTING PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
004-019	Fillister head screw	1	\$.10
004-024	Jaw	1	14.80
004-042	Washer 7/64	1	.10

Other parts same as No. 4-B Punch

NO. 4-R PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
004-026	Jaw	1	\$27.60
004-027	Die holder	1	6.90
004-028	Lever	1	.45
004-029	Dowel pin	1	.60
004-030	Sleeve	1	1.20
004-031	Spring	1	.90
004-032	Fillister head screw	1	.10
004-033	Key	1	5.65

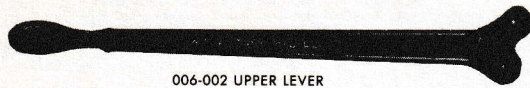
Other parts same as No. 4-B Punch

NO. 45 PUNCH

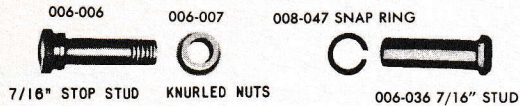
PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
004-501	Jaw	1	\$ 5.90

Other parts same as No. 4-B Punch

PARTS NO. 6 PUNCH



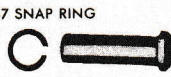
006-002 UPPER LEVER



7/16" STOP STUD



KNURLED NUTS



006-036 7/16" STUD



006-001 JAW



006-003 INTERMEDIATE



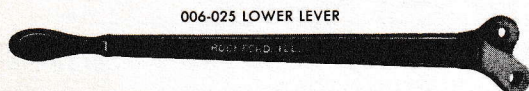
DIE



PUNCH



006-013 KEY



006-025 LOWER LEVER

PARTS NO. 8B PUNCH

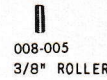
NUMBER 8B PUNCH



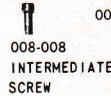
008-002 LEVER



008-015 GAUGE



008-005 3/8" ROLLER



008-008 INTERMEDIATE SCREW



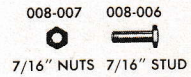
008-004 SIDE LINK



008-003 INTERMEDIATE



004-016 GAUGE SCREW



008-007 7/16" NUTS 7/16" STUD



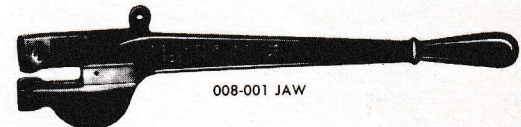
008-013 KEY



PUNCH



DIE



008-001 JAW

PARTS NO. 8C PUNCH

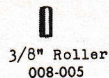


008-002 LEVER

Crimping Side Link 008-036



Side Link 008-004



3/8" Roller 008-005



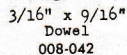
7/16" Snap Ring 008-047



Gage 008-015



Gage Screw 008-016



3/16" x 9/16" Dowel 008-042



Dowel 008-043



Dowel 008-044



Crimping Plunger 008-037



Spring 008-041



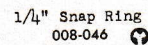
Spring Stud 008-038



7/16" Stud 008-032



5/32" x 1" Die Pin 008-048



1/4" Snap Ring 008-046



Punch 008-033



1/4" Stud 008-045



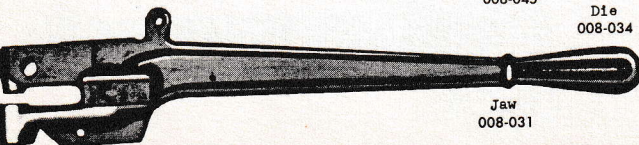
Die 008-034



Intermediate 008-003



Plunger Lever 008-035



Jaw 008-031

PARTS NO. 91 BENCH PUNCH



002-048 PIPE HANDLE



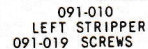
091-002 LEVER



091-013 ROLLER



091-004 INTERMEDIATE



091-010 LEFT STRIPPER SCREWS



091-008 INTERMEDIATE PIN



091-014 5/8" STUD



091-003 SIDE LINK



091-001 JAW



091-002 LEVER



091-003 SIDE LINK



091-001 JAW



091-001 JAW

002-048 PIPE HANDLE

091-017 GAUGE

091-018 GAUGE SCREW

091-007

091-006 PUNCH RAM

091-022 SET SCREW

091-023 SET SCREW WRENCH

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

091-005 RAM LINK

091-009 RIGHT STRIPPER

091-015 STUD

091-016 GAUGE STOP

091-018 GAUGE SCREW

NO. 6 PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
006-001	Jaw	1	\$10.85
006-002	Upper lever	1	8.25
006-003	Intermediate	1	5.70
006-006	7/16 Stop Stud	1	.55
006-007	7/16 Knurled nuts	2	.25
006-013	Die key	1	.25
006-025	Lower lever	1	9.20
006-036	7/16 Stud	3	.55
008-047	Snap ring	6	.15

NO. 8-B PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
004-016	Gage screw	1	\$.35
008-001	Jaw	1	12.25
008-002	Lever	1	6.80
008-003	Intermediate	1	6.50
008-004	Side links	2	.80
008-005	3/8 Roller	1	.45
008-006	7/16 Stud	2	.50
008-007	7/16 Nuts	4	.15
008-008	Intermediate screw	1	.50
008-013	Die key	1	.25
008-015	Gage	1	.35

NO. 8-D INDENTING PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
008-017	Jaw	1	\$18.25
008-018	Lock nut	1	.45

Other parts same as No. 8-B Punch

NO. 8-C CLIP PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
008-002	Lever	1	\$ 6.80
008-003	Intermediate	1	6.50
008-004	Side Links	2	.80
008-005	3/8 Roller	1	.45
008-008	Intermediate screw	1	.50
008-015	Gage	1	.35
004-016	Gage screw	1	.30
008-031	Special jaw	1	21.80
008-032	Studs	2	.65
008-033	Special punch	1	5.40
008-034	Special die	1	4.80
008-035	Plunger lever	1	5.10
008-036	Crimping side link	2	1.40
008-037	Plunger	1	4.85
008-038	Spring stud	1	.35
008-041	Spring	1	.35
008-042	Dowel	1	.55
008-043	Dowel	1	.35
008-044	Dowel	1	.30
008-045	Stud	2	.65
008-047	Snap rings 7/16	2	.15
008-048	Die pin	1	.25
008-061	Snap rings	2	.10

NO. 91 BENCH PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
002-045	Lever stud nuts	2	\$.20
002-048	Pipe handle	1	2.00
008-007	Intermediate stud nut	1	.15
091-001	Jaw	1	89.00
091-002	Lever	1	15.80
091-003	Side link	2	5.10
091-004	Intermediate	1	22.35
091-005	Link	1	2.75
091-006	Punch ram	1	13.00
091-007	Ram link pin	1	.60
091-008	Intermediate pin	1	.85
091-009	Narrow stripper(right)	1	.90
091-010	Narrow stripper(left)	1	.90
091-011	Wide stripper(not (right) shown)	1	3.15
091-012	Wide stripper(not (left) shown)	1	3.15
091-013	Roller	1	.85
091-014	5/8" stud	2	.95
091-015	Intermediate stud	1	.65
091-016	Gage stop	1	2.15
091-017	Gage stem	1	1.20
091-018	Gage screw	1	.20
091-019	Stripper screw	4	.15
091-020	Bolster plate screw	2	.15
091-022	Set screw	1	.20
091-023	Allen set screw wrench	1	.20
091-024	*Die shoe 7/8	1	10.00
091-025	*Die shoe 1-3/16	1	12.00
091-026	*Die shoe 1-15/16	1	12.50
091-027	*Die shoe 2-7/16	1	12.95

* Die shoe not shown

NO. 92 BENCH PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
092-001	Jaw	1	\$98.95

Other parts same as No. 91 Punch

NO. 93 BENCH PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
093-001	Jaw	1	\$176.00

Other parts same as No. 91 Punch

NO. 94 BENCH PUNCH

PART NUMBER	PART NAME	NO. REQ.	PRICE EACH
094-001	Jaw	1	\$262.00

Other parts same as No. 91 Punch

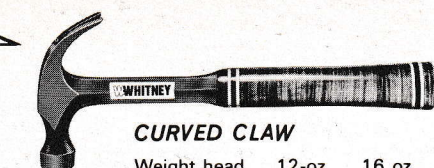
THE ORIGINAL
W.A. Whitney

Rockford, Illinois
Est. 1907

WAW

ESTWING HAMMERS

TOOL or PART No.	LIST PRICE
B-12-C	4.45
E-12-C	4.95
B-16-C	4.50
E-16-C	5.00
B-20-C	4.75
E-20-C	5.25
B-28-C	5.00
E-28-C	5.50
B-12-S	4.45
E-12-S	4.95
B-16-S	4.50
E-16-S	5.00
B-20-S	4.75
E-20-S	5.25
B-8-BP	4.45
E-8-BP	4.95
B-12-BP	4.50
E-12-BP	5.00
B-16-BP	4.50
E-16-BP	5.00
B-24-BP	4.75
E-24-BP	5.25
B-32-BP	5.00
E-32-BP	5.50
B-40-L	4.75
E-40-L	5.25
B-28-S	5.00
E-28-S	5.50
B-1-H	5.10
E-1-H	5.60
B-2-H	5.35
E-2-H	5.85
B-30	4.50
E-30	5.00
B-12-BL	4.50
E-12-BL	5.00
B-20-BL	4.75
E-20-BL	5.25



CURVED CLAW

Weight head	12 oz	16 oz	20 oz
Wt per doz	14 lb	19 lb	22 lb
Painted	B12C	B16C	B20C
Polished	E12C	E16C	E20C



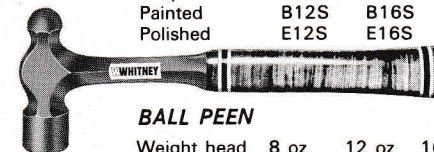
28-OZ HEAVY-DUTY CURVED CLAW

Weight head	28 oz
Wt per doz	27 lb
Painted	B28C
Polished	E28C



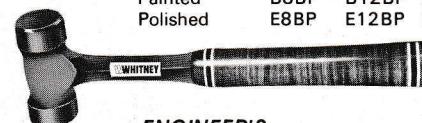
STRAIGHT CLAW

Weight head	12 oz	16 oz	20 oz
Wt per doz	14 lb	19 lb	22 lb
Painted	B12S	B16S	B20S
Polished	E12S	E16S	E20S



BALL PEEN

Weight head	8 oz	12 oz	16 oz	24 oz	32 oz
Wt per doz	12 lb	14 lb	19 lb	25 lb	30 lb
Painted	B8BP	B12BP	B16BP	B24BP	B32BP
Polished	E8BP	E12BP	E16BP	E24BP	E32BP



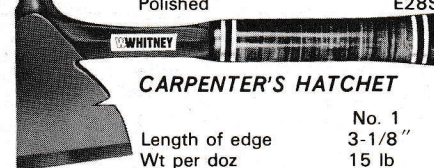
ENGINEER'S

Weight head	2-1/2 lb
Wt per doz	34 lb
Painted	B40L
Polished	E40L



28 OZ HEAVY-DUTY STRAIGHT CLAW

Weight head	28 oz
Wt per doz	27 lb
Painted	B28S
Polished	E28S



CARPENTER'S HATCHET

	No. 1	No. 2
Length of edge	3-1/8"	3-5/8"
Wt per doz	15 lb	25 lb
Painted	B1H	B2H
Polished	E1H	E2H



PROSPECTOR'S PICK Sheath Extra

Weight head	22 oz
Wt per doz	25 lb
Painted	B30
Polished	E30



BRICKLAYER'S

Weight head	12 oz	20 oz
Wt per doz	14 lb	22 lb
Painted	B12BL	B20BL
Polished	E12BL	E20BL

TINNER'S SETTING

Weight head	18 oz
Wt per doz	21 lb
Catalog No.	B18

Painted B-18	4.05
Polished T-18	4.55



TINNER'S RIVETING

Weight head	12 oz
Wt per doz	14 lb
Catalog No.	B12

Painted B-12	3.85
Polished T-12	4.35



Engineer double-faced hammer packed two per shelf box. All others packed four per shelf box.

These unbreakable hand tools have a blue painted finish. Polished finish tools, 50c more than painted finish tools. Leather grip absorbs the shock and will last the life of the tool and is not affected by oil, sweat, and grease.

Perfect balance of tools not affected by usage. Built right to withstand everyday use on the job. Heat-treated all over.

ENGINEERING CHART

DECIMAL EQUIVALENTS

Fraction	Decimal	Drill Size	Sheet Metal Gage	Fraction	Decimal	Drill Size	Sheet Metal Gage	Fraction	Decimal	Drill Size	Sheet Metal Gage
	.006		38		.113	33		9/32	.28125		
	.0064		37		.116	32			.290	L	
	.0067		36		.1196		11		.295	M	
	.0075		35		.120	31		19/64	.29688		
	.0082		34	1/8	.125				.302	N	
	.0090		33		.1285	30		5/16	.3125		
	.0097		32		.1345		10		.316	O	
	.0105		31		.136	29			.323	P	
	.012		30		.1405	28		21/64	.32813		
	.0135		29	9/64	.14063				.332	Q	
	.0149		28		.144	27			.339	R	
1/64	.01563				.147	26		11/32	.34375		
	.0164		27		.1495	25	9		.348	S	
	.0179		26		.152	24			.358	T	
	.0209		25		.154	23		23/64	.35938		
	.0239		24	5/32	.15625				.368	U	
	.0269		23		.157	22		3/8	.375		
	.0299		22		.159	21			.377	V	
1/32	.03125				.161	20			.386	W	
	.0329		21		.1644		8	25/64	.39063		
	.0359		20		.166	19			.397	X	
	.040	60			.1695	18			.404	Y	
	.041	59		11/64	.17188			13/32	.40625		
	.0418		19		.173	17			.413	Z	
	.042	58			.177	16		27/64	.42188		
	.043	57			.1793		7	7/16	.4375		
3/64	.0465	56			.180	15		29/64	.45313		
	.04688				.182	14		15/32	.46875		
	.0478		18		.185	13		31/64	.48438		
	.052	55		3/16	.1875			1/2	.500		
	.0538		17		.189	12		33/64	.51563		
	.055	54			.191	11		17/32	.53125		
	.0595	53			.1935	10		35/64	.54688		
	.0598		16		.1943		6	9/16	.5625		
1/16	.0625				.196	9		37/64	.57813		
	.0635	52			.199	8		19/32	.59375		
	.067	51			.201	7		39/64	.60938		
	.0673		15	13/64	.20313			5/8	.625		
	.070	50			.204	6		41/64	.64063		
	.073	49			.2055	5		21/32	.65625		
	.0747		14		.2092		5	43/64	.67188		
	.076	48			.209	4		11/16	.6875		
5/64	.07813				.213	3		45/64	.70313		
	.0785	47		7/32	.21875			23/32	.71875		
	.081	46			.221	2		47/64	.73438		
	.082	45			.2242		4	3/4	.750		
	.086	44			.228	1		49/64	.76563		
	.089	43			.234	A		25/32	.78125		
	.0897		13	15/64	.23438			51/64	.79688		
	.0935	42			.238	B		13/16	.8125		
3/32	.09375				.2391		3	53/64	.82813		
	.096	41			.242	C		27/32	.84375		
	.098	40			.246	D		55/64	.85938		
	.0995	39		1/4	.250	E		7/8	.875		
	.1015	38			.257	F		57/64	.890625		
	.104	37			.261	G		29/32	.90625		
	.1046		12	17/64	.26563			59/64	.921875		
7/64	.1065	36			.266	H		15/16	.9375		
	.10938				.272	I		61/64	.953125		
	.110	35			.277	J		31/32	.96875		
	.111	34			.281	K		63/64	.984375		

inside cover

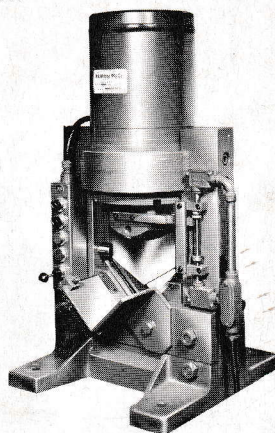
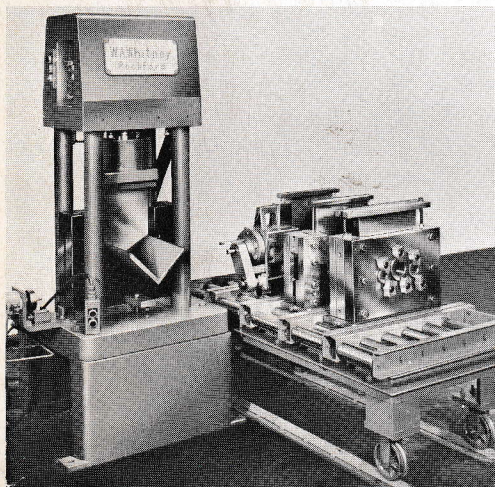


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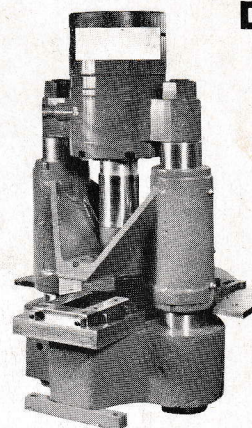
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Capacities to 150 ton



DOUBLE-HEADED PRESS

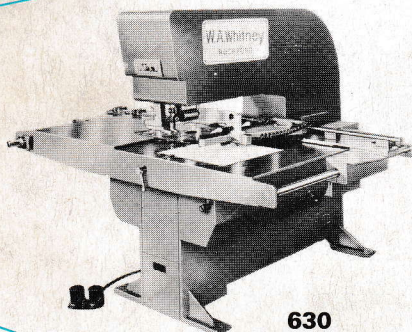
Cope • Notch • Bend
with one press
2 models—capacities
to 36 ton
Fabricate 3/8" M.S.



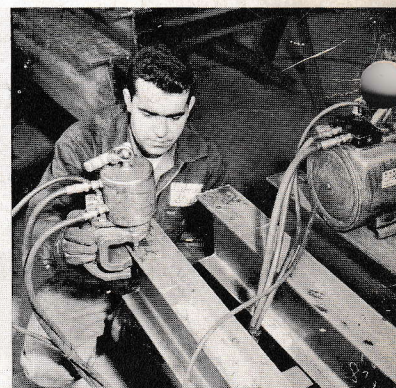
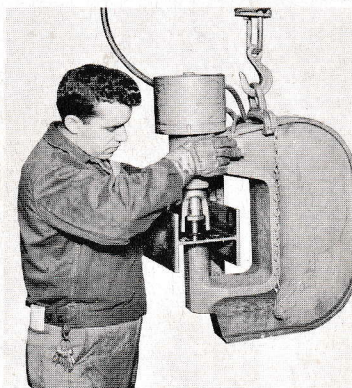
Take the Punch to the Work

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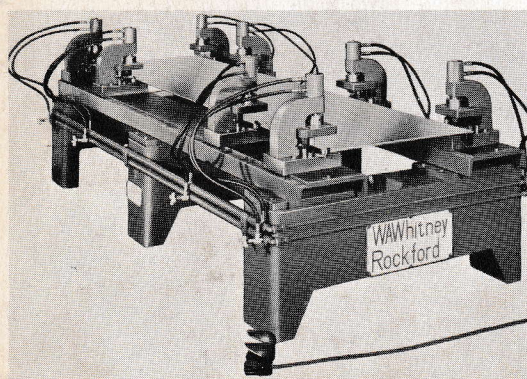
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DUPLICATOR**
30 TON
CAPACITY



Do-it-yourself
Modular Gang Punches
with Standard Components



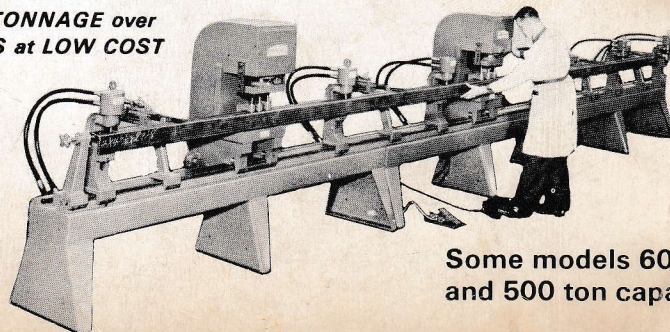
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simultaneously—large thin
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Obtain **HIGH TONNAGE** over
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